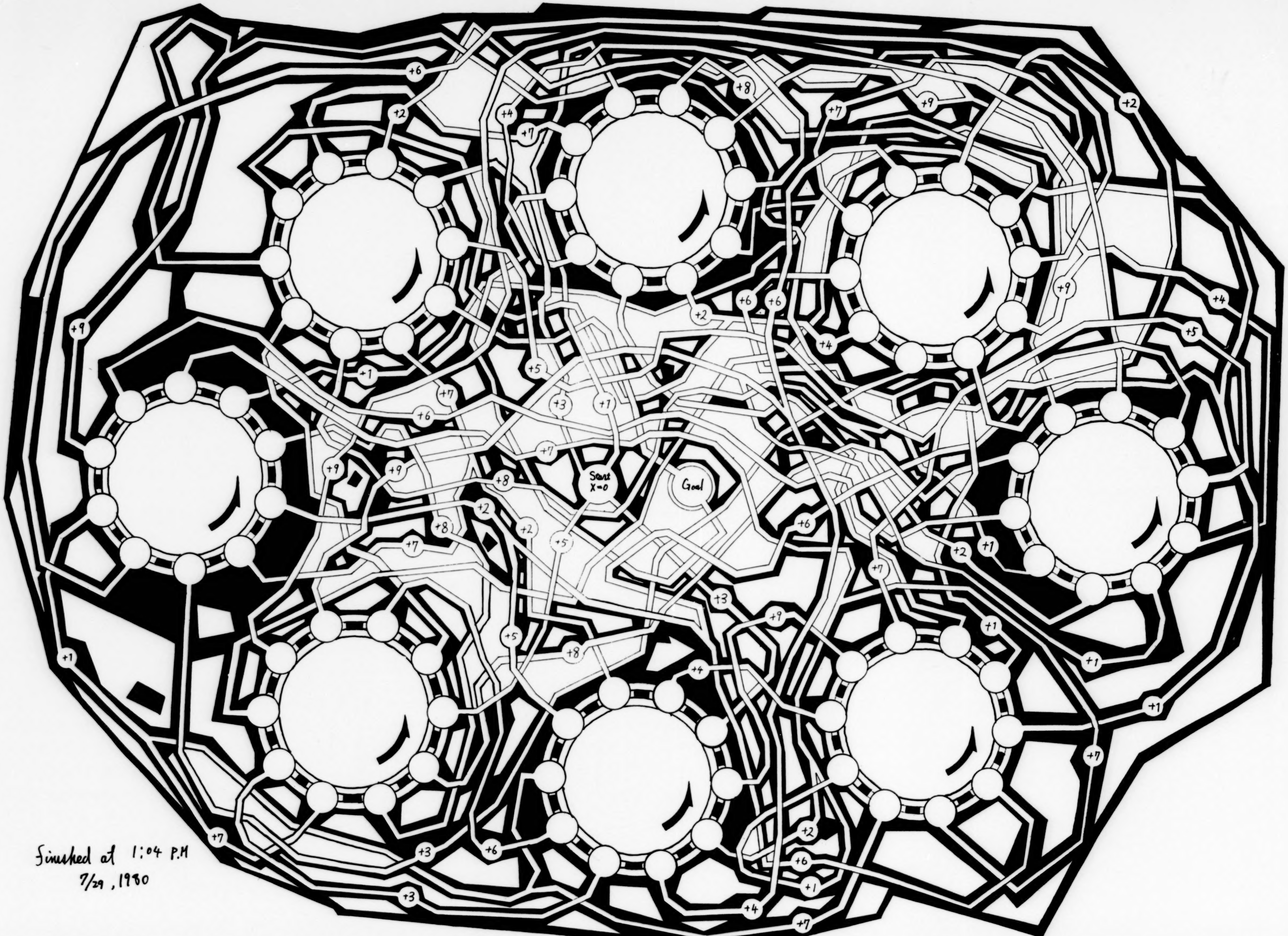
COEVOLUTION

Quarterly

No. 37 Spring 1983 $4

KEN KESEY in Alaska

— parts of a novel-in-progress


Start X=0
Goal

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7/29, 1980

Amazing Maze

by Shinpei Yoshida

I teach English here in Japan. One of my students makes amazing mazes, four of which are enclosed. I thought *CoEv* might be interested since they are unlike any mazes I've ever seen. Their creator's name is Shinpei Yoshida, more commonly known among my students as "Mr. Maze." He studies genetics and mathematics at Osaka University. He's a "mad genius" sort of person. In addition to designing mazes, he plays classical piano and has the largest collection of contemporary music albums that I have ever seen. It is even larger than his collection of horror movie posters.

With each maze are instructions . . . and I hope I've made them clear enough. One hint: each maze contains a trick that you must discover in order to reach the GOAL. For example: In one of the mazes (I won't tell you which one), you have to find a way to reverse directions in order to solve it . . . you have to learn in the process of doing if you want to reach the GOAL.

About his mazes he says, "You won't go crazy trying to solve my mazes because I didn't go crazy when I made them" (a statement I find questionable) and "The aesthetics of the maze are just as important as the concept." His future goals are: 1. to make a maze that a computer can't solve 2. to add color as a structural element 3. to make a maze where you have no choice which way you go – you'll be completely controlled by vectors 4. to publish a book of mazes. I solved only one of the mazes enclosed and it took me six hours. I'll pass the rest on to you guys – good luck!

Recent correspondence with Mr. Maze:

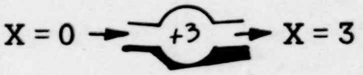
"I'm now making a maze that combines all the mathematical concepts (concept of parameter space, distribution of the parameter, transformation of the group and other concepts) I've previously used. It was very hard to get a whole image of this maze. It seems impossible to think about it, but now I am able to feel it. My way of thinking has changed and I've become very flexible."

Jhon Einarsen
Hokkaido, Japan

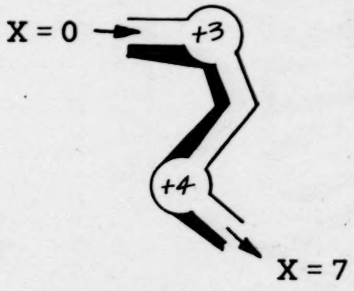
As you may remember, Jhon was one of two Americans who led traveling Japanese teenagers in "I Never Thought to See So Large a Land" (CQ Winter 1980). More examples of Mr. Maze's work will follow in future issues – slowly, to avoid burnout. *–Art Kleiner*

INSTRUCTIONS:
Time Limit: Unlimited; Lots and Lots of Luck!

1. This maze is three-dimensional and has overpasses and underpasses.
2. The START and GOAL are at the center of the maze.
3. Reversing directions is prohibited (See number five).
4. A. There are many circles (gates) in which digits are written. When you begin the maze you have a number X which equals 0. When you reach the first circle, add the number written to X and go through:



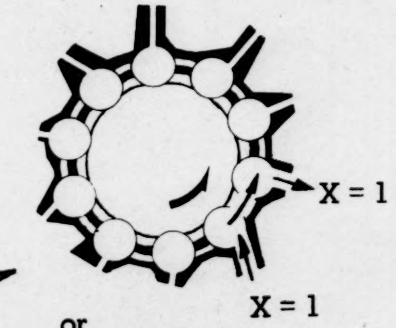
B. Don't forget the value of X, for when you reach the next gate you add that number to X. For example:



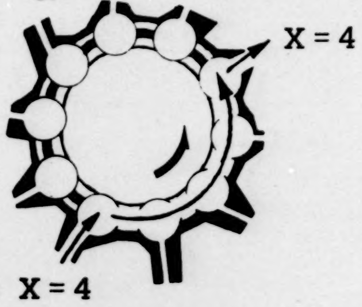
Add on and pass through. Every time you pass through a gate you must add the number to X.

C. If the total of X amounts to 10 then X becomes 0 again. Or if the total of X is +8, for example, and you pass through a gate that is +4, your new number is +2, not +12. So X is always 0 or greater and less than 10.

5. You can see eight large circles around the START and GOAL. These are monorail looplines and each one has 10 stations (the smaller circles) where you can get on and off. All the monorails go in a counter-clockwise direction (indicated by arrows). If number X=+1, for example, and you get on a monorail, then you can advance only one station in the counterclockwise direction and get off:



or



The value of X doesn't change when you get off – it remains the same. If the value of X=0 and you reach a station, you can't advance and you must turn back. This is the only case in which reversing directions is allowed. And you cannot get off along the way – if X=4, then you must proceed to the fourth station and get off.

6. When you reach the GOAL, X can be any value. ■

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CoEVOLUTION Quarterly

Spring 1983

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COVERS

The front cover shows author Ken Kesey in "the largest gin and tonic in the world," the Copper River melting out of a glacier near Cordova, Alaska. Photographer Brian Lanker accompanied Kesey up there on a research trip which helped produce "Alaska The Point of It," notes for a new novel, beginning on page 72.

The back cover shows Kokopelli, the Humpbacked Flute Player, the Southwest Native American god of genetic diversity. The Puebloan tile, one of many Indian images depicting Kokopelli, is shown with two types of corn species – podcorn (top) and pueblo corn (below) – preserved by native farmers whose tradition is linked with the Kokopelli myth. Photographer Gary Nabhan is the botanist who wrote and gathered the pictures for "The Humpbacked Flute Player" on page four. –Art Kleiner

'CoEvolution BOLD'

As opposed to **CoEvolution LITE**. *The difference is eight pages this quarter. A matter of taste.*

From our direction it's a matter of courtesy. A number of people who use and like **CoEvolution** *do not use or like the occasional articles we print with explicit sexual content, so those are left out of the "Lite" edition. In this issue it was "Texas Crude" and "Sexus Revisited," pages 88-95.*

Receiving "Lite" or "Bold" **CQ** *is up to the subscriber.*
–Stewart Brand

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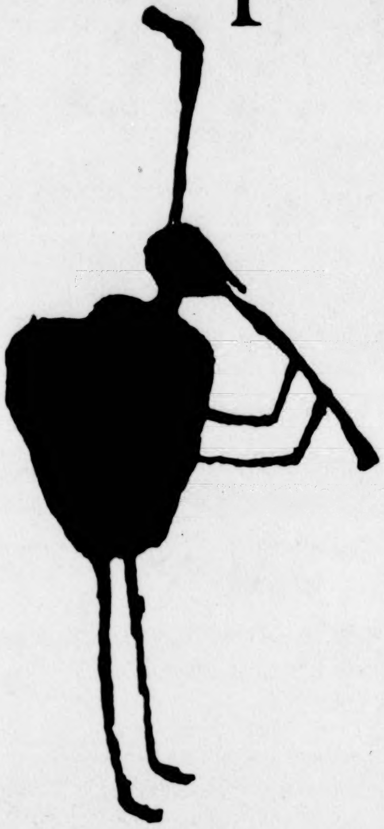
LAND USE

KOKOPELLI - The Humpbacked Flute Player

A Native American patron saint for conserving agricultural diversity as a community responsibility

by Gary Nabhan



ETIENNE B. RENAUD, KOKOPELLI, IN SOUTHWESTERN LORE, SEPTEMBER 1948

This and similar drawings in this article show some of the many representations of Kokopelli the Locust, the Humpbacked Flute Player, copied from prehistoric Pueblo Indian pottery fragments and petroglyphs by archaeologists in the 1920s and 1930s. "In his hump he carried blankets, belts, embroidered scarves, and some seeds and grains, as presents which he gave to each girl whom he seduced." Other Kokopelli pictures show different spellings of his name, based on their sources.

Gary Nabhan is a bit of a hump-backed flute player himself. He's been appearing at various Southwest Indian reservations bearing seeds of vegetables that the locals haven't seen in decades and long ago gave up on. Both he and the Indians are intent on a sustainable agriculture that spans centuries, that uses the accumulated botanical wisdom of centuries. It's first-rate science.

This paper was originally given as a talk at the Lindisfarne Fellows Conference, November 1982, Crestone, Colorado. A cassette of the talk (minus Gary's slides) is available for $7 postpaid from The Lindisfarne Press, RD#2, West Stockbridge, MA 01266. His book ***The Desert Smells Like Rain*** *is reviewed on page 26. –Stewart Brand*

©Gary Nabhan, Native Seeds/SEARCH
3950 New York Drive, Tucson, AZ 85705

In **The Gift of Good Land,** Wendell Berry expresses the true, hard challenge for those who are involved in farming and resource conservation:

> The most necessary thing in agriculture . . . is not to invent new technologies or methods, not to achieve "breakthroughs," but to determine what tools and methods are appropriate to specific people, places, and needs, and to apply them correctly. Application (which the heroic approach ignores) is the crux, because no two farms or farmers are alike; no two fields are alike. Just the changing shape or topography of the land makes for differences of the most formidable kind. Abstractions never cross these boundaries without either ceasing to be abstractions or doing damage. . . . The bigger and more expensive, the more heroic they are, the harder they are to apply considerately and conservingly.[1]

Wendell Berry makes clear the contrast between heroic abstractions, characteristic of certain religious traditions, and daily *practice*, sometimes found at the margins of these same traditions. He feels that although the Bible does define proper human uses of the natural world, the heroic Judeo-Christian tradition has been too abstract, not *earthly* enough in its application or in its attention to practical particulars. Even the earthward example of St. Francis of Assisi was never seriously applied by the Franciscan order; even before his death, the Franciscan institution decided that he was "for the birds." This "other worldly" philosophy has long dominated civilized mankind, and Berry urges us to return to responding skillfully to the particulars of the place in which we live.

I sense that much of the ecological destruction wrought by people participating in certain religious traditions is not considered by them to be *spiritually impoverishing* in any way. Although desertification in the Middle East has been blamed on the Judeo-Christian tradition, it clearly predates and is not limited to just this one branch of Western religion. It is perhaps not surprising that the so-called cradle of Western religions and of annual grain agriculture – the Tigres-Euphrates "Fertile Crescent" – was one of the first areas in the world to be ravaged by soil erosion, siltation, and salinization as a consequence of poor agricultural management. Fields at Tell Asmar from 6000 years ago now sit under ten to eleven meters of silt.[2] Yet I doubt that a fact such as this is ever discussed in courses on the history of Western religions – it is not recognized as evidence of *negative feedback* or poor practices associated with a belief system; it may even be considered to have *nothing to do* with religion.

In contrast to this view, there still exist traditional (though not *unchanging*) communities in which the way that one farms and concerns himself with wild resources has *everything to do* with the spiritual life of the community. Some of these are Native American communities, which have associated with them agricultural fields that have been tended for centuries; a few of these villages are considered to be among the longest continuously inhabited places in North America. This stability through time has helped harbor agricultural diversity. These villages offer us insights into the mutually reinforcing connections between spiritual life and skillful care for the ecological integrity of food-producing land.

Although I am not a resident of these communities, I have worked in some of them. My friends within them have taught me some things that have stirred up my beliefs, and redirected my learning toward certain practical skills. Yet I do not wish to make Hopi and Papago farmers out to be "heroes" of the sort that are in some kind of ideal balance with nature, as if you could put a dozen noble savages on one side of a scale, and a dozen plants and animals on the other, and strike some kind of homeostasis. When we decide that Indians are or are not "in balance," we usually stop there in learning anything from them; these two choices limit rather than advance our understanding. Certainly, contemporary Native Americans are increasingly faced with serious land-use problems, as the results of economic pressures and acculturation that have caught up with them. Local deforestation occurred prehistorically, and native people suffered the consequences. I will even grant that when a large wave of Native American ancestors crossed the Bering Straits ten to twelve thousand years ago, these invaders played a key role in the extinction of mammoths, mastodons, horses, and camels, and that since then, other local faunal extirpations have occurred due to short-term over-exploitation. Yet I tend to agree with Calvin Martin that "on the whole, the North American Indian earns high marks for his cautious use of plant resources . . . cautiously because she (Nature) could strike back against abuse."[3]

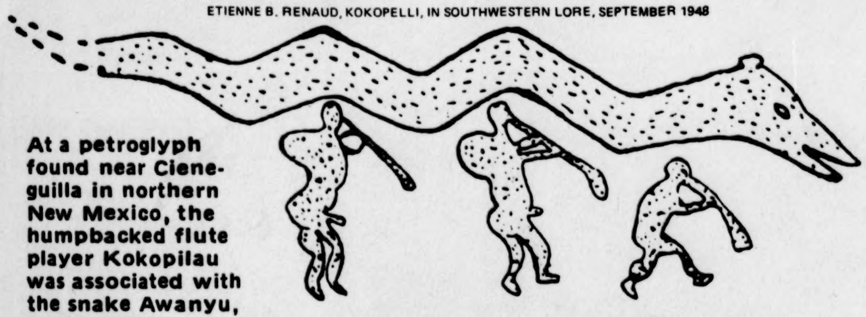
I also agree with Martin that a spiritual contract between certain cultures and particular lifeforms is evident, but I do not pretend to understand the depth and complexity of their spiritualism. A final apology: I do not wish to imply that all Papago or Hopi accept the viewpoints I am about to discuss. Rather than speaking for them, I am simply relating a few things that some of them have spoken to me.

GARY NABHAN

A field of Hopi tepary bean plants, adapted through generations of Indian cultivation to grow in sand dunes in Arizona.

For several years I have been studying native agricultural ecosystems in the desert Southwest, and the drought- and heat-adapted crops which allow them to function. They are *native* not merely because Native Americans farm them. They are *native* because their crops are mostly ones that evolved from wild relatives which can still be found in or nearby these fields. They are pollinated by endemic solitary bees that coevolved with particular American plant genera and are much more efficient in pollen transfer and more faithful to their crops than are honeybees. Certain indigenous legumes such as the tepary bean have associated them with nitrogen-fixing *Rhizobia* bacteria endemic to the region. These crops and their symbionts are finely tuned to local climatic and soil conditions. In *ak-chin* floodwater fields, nutrient-rich runoff from local watersheds is utilized, rather than water "imported" from mountains nearby or from underground aquifers filled during the Pleistocene. These fields exemplify the concept that

ETIENNE B. RENAUD, KOKOPELLI, IN SOUTHWESTERN LORE, SEPTEMBER 1948



At a petroglyph found near Cieneguilla in northern New Mexico, the humpbacked flute player Kokopilau was associated with the snake Awanyu, a rain god.

agricultural ecologists George Cox and Michael Atkins have written of – that the food-producing systems having the best chance of enduring are those which deviate *least* from the energy flows and nutrient cycles of the natural ecosystems within which they work.[4] Some of the native fields are so well integrated into natural desert ecosystems that it took European-Americans literally centuries of contact to realize that cultures such as the Sand Papago and Southern Paiute farmed as well as gathered. Papago fields, unlike most "advanced" agricultural systems, show levels of plant diversity comparable to the surrounding wild floodplain environments, rather than reducing nature to monoculture.

Needless to say, these native fields provide a sober contrast to the modern water-consumptive agriculture transplanted to the desert, which is undergoing a demise. Some of the highest rates of water loss from transpiration recorded in the world have been observed in exotic crops under irrigated agriculture in the Phoenix, Arizona, area. Whereas hybrid corn and cotton use two to three acre-feet of irrigation water in central Arizona, native crops such as teparies produce respectable yields on eight to twelve acre-inches, and their yields decrease with excessive irrigation. Introduced crops sometimes require two to five times the irrigation a native crop would need, if one takes into account irrigation to cool the environment, deliver chemicals, etc. The native strategy is the opposite – to fit the crop to the environment rather than trying to remake the environment to fit the crop.

Side view of a Kokopelli effigy pitcher, about 12 inches long, dating ca. A.D. 1000-1150, found in a Pueblo site in northwestern New Mexico. The rounded contour of its underside represents the humped back.

MARJORIE F. LAMBERT, A KOKOPELLI EFFIGY PITCHER, IN AMERICAN ANTIQUITY, JULY 1967

AS PART OF MY WORK, I have been helping Indian farmers to locate and conserve native desert-adapted crop varieties, since it is projected that over half of the crop varieties utilized in the New World at the time of Columbus may have already been driven to extinction due to colonial suppression, acculturation and other factors. Where do the remaining varieties persist? In the fields of Native American communities with a strong traditional spiritual life – of more than 40 reservations in the Southwestern states, it is largely the five or ten where native ceremonial observances persist that the genetic diversity of desert crops persists as well.

This is more than just a correlation. At the Hopi mesas, where more than 18 named varieties of beans and over 20 named varieties of corn have been recorded, many of those which persist are utilized in ceremonies basic to the community's spiritual life. While on the surface these ceremonies could be interpreted as being as "abstract" as some Christian observances, they serve to tie people into the land community of plants and animals in very concrete ways.

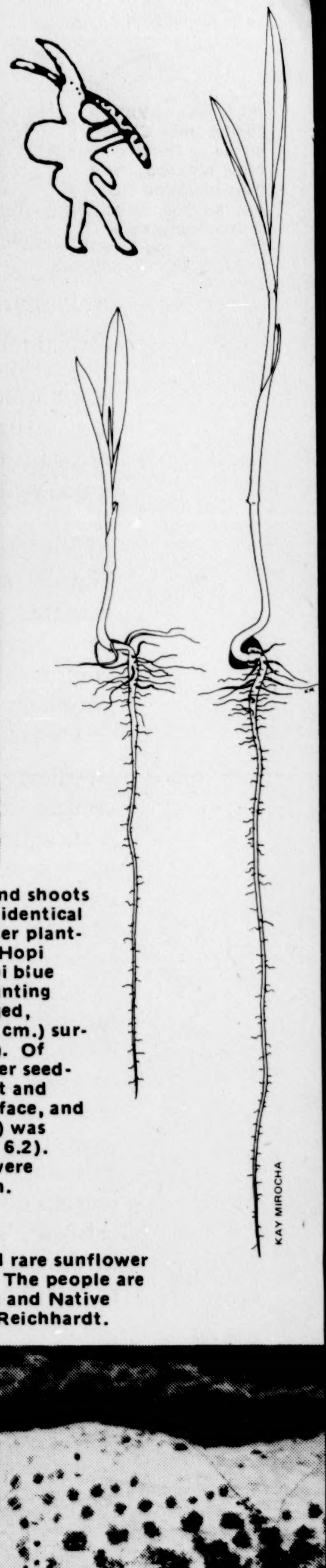
A few years ago, I was inquiring at a Hopi home about a bean variety that not only is resistant to root knot nematodes but is higher in protein quality and quantity, as well as in several minerals, than most beans found in our grocery stores. A Hopi man at Second Mesa told me, "Oh yes, I always have some of these stored away, and I grow them every year as well. We need them to sprout in the kiva prior to the *Powamu*, the Bean Dance in the the winter."

I had been to the Bean Dance the year before, and had seen the 45-centimeter-long sprouts delivered door to door by *Katsina* dancers one frosty dawn. "So those are the kind of beans that make the long sprouts?" I asked. The Hopi man laughed and replied, "Yes, that's the one – those *pahaana* [white man] beans won't even work. We had a new boy initiated into the kiva last year who didn't help grow out his clan's beans, and thought he could get away with just buying some white lima beans at the store to use in the kiva. He planted them in the sand basins just like we did our Hopi bean, but when our sprouts were tall, his hadn't even come up. Did he ever *hear it* from the other men. . . ." The reason the newly initiated boy was chastised by the other kiva members is that this later winter underground planting of beans is said to forecast the productivity of the coming crop season. If the beans do well in the sand basins in the kiva, the crops in the summer fields will be plentiful. The boy had perhaps endangered the coming crop and the optimism of the ceremony by *not* paying attention to particulars – all beans are *not* the same.

While the Hopi make fine distinctions between

CALIFORNIA ACADEMY OF SCIENCES, IN PACIFIC DISCOVERY, JANUARY 1982

A Hopi farmer growing corn in the desert near Shipaulovi (part of the Second Mesa) in northeastern Arizona.



KAY MIROCHA

Average sizes of maize roots and shoots for two varieties grown under identical conditions, shown six days after planting 22 cm. deep in sand from Hopi dunes. The sand-adapted Hopi blue corn (right) tolerated deep planting better; nearly all plants emerged, and mean shoot growth (24.2 cm.) surpassed root growth (22.1 cm.). Of Bantam sweet corn (left), fewer seedlings emerged, a few were bent and curled before reaching the surface, and mean shoot growth (12.8 cm.) was much less than root growth (16.2). Both root and shoot growth were roughly half that of Hopi corn.

particular varieties of crops, they are careful to maintain some variation within each variety. Perhaps I should say, they are careful not to be *too* careful, or to act as though they could totally control a crop's destiny. On one occasion, I asked a Hopi woman at Munqapi if she selected only the biggest corn kernels of all one color for planting her blue maize. She snapped back at me, "It is not a good habit to be too picky . . . we have been given this corn, small seeds, fat seeds, misshapen seeds, all of them. It would show that we are not thankful for what we have received if we plant just certain ones and not the others." Agricultural ecologists have demonstrated that such genetic mixtures are key to farming in marginal, unpredictable environments. While no single native seed may do as well as hybrid corn under optimal conditions, the mix may well outyield it under variable conditions.

In a similar way, many Indians are tolerant of certain plants in their fields that outsiders would call weeds. Some of these, like the anomalous sunflower, found at Hopi, are not only wild relatives of cultivated crops, but they are rare enough to be considered for threatened species status elsewhere in their range. On the mesas, this sunflower is found almost exclusively around sand dune fields, where it is specially recognized and left to grow. Most untrained observers would be hard-pressed to recognize it as being different from the common wild sunflower species. Yet for centuries, the Hopi have let it grow around their fields, and have harvested some of its petals, from which they

GARY NABHAN

Helianthus anomalus, the wild rare sunflower which Hopi protect in fields. The people are Hopi farmer Richard Pentewa and Native Seeds/Search botanist Karen Reichhardt.

make a yellow ceremonial face-paint. It has been sustained despite this low-level harvesting, adding to the diversity of their fields and perhaps occasionally contributing genes to the Hopi's cultivated sunflower. A valley of fields is named for it — *A'qa'qaungwu* —in recognition that even rare wild things have their place in this world.

My impression is that these gestures of concern for other living things aren't done out of economic motives, even though the failure to do so might later affect the community economically. These are acts done out of the Hopi sense of spiritual propriety.

Similarly, I have heard Papagos argue that it is a spiritual responsibility to farm, and that failure to do so erodes the community from the *O'odham Himdag*, the People's Way. Since the Papago way of farming is rainfall and watershed dependent, they enter into an intricate system of mutual feedback with natural events: To farm, they must have rain. To rain, they must have a cactus wine feast and "throw up the clouds." To harvest enough cactus fruit, there must have been enough rain for the saguaros to be productive. To be productive, it must have rained earlier, but also, no one must have harmed the saguaro cactus in any way, for they are people too, and vulnerable.[5]

Yet the rain that falls on the field itself is not enough to sustain a crop; the desert washes must run free to bring water into their fields. The water from the sky must meet the water from the ground. When watersheds and aquifers are tampered with, the whole web of interactions begins to unravel. Imagine cranky old Papago farmers showing up at government meetings to complain

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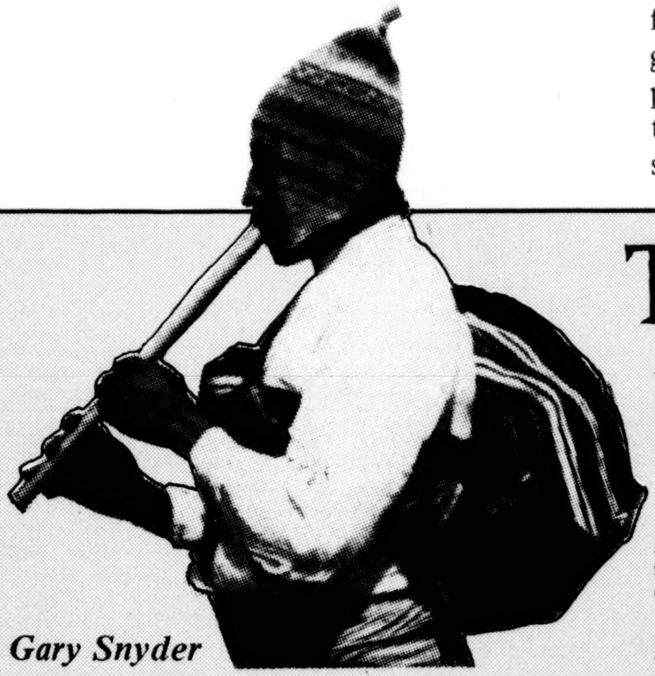
The Hump-backed Flute Player



A Quichua Indian of Cochabamba, photograped in 1942, showing the carrying blanket and flute common throughout the Andean highlands. Wrote botanist Hugh Cutler, "Possibly one of his ancestors, similarly equipped, carried pod corn to North America and became the legendary flute player, Kocopelli."

CALIFORNIA ACADEMY OF SCIENCES.
IN PACIFIC DISCOVERY, JANUARY 1982

by Gary Snyder

1.

The hump-backed flute player
walks all over.
sits on the boulders around the Great Basin
his hump   is a pack.
Hsüan Tsang
went to India 629 AD
returned to China 645
with 657 sutras, images, pictures,
and 50 relics —
a curved frame pack with a parasol,
embroidery, carving,
incense censer swinging as he walked
the Pamir   the Tarim   Turfan
the Punjab   the doab
of Ganga and Yamuna,

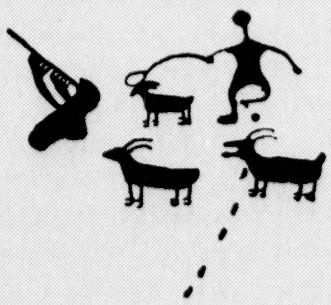
Sweetwater, Quileute, Hoh
Amur, Tanana, Mackenzie, Old Man,
Bighorn, Platte, the San Juan

he carried
"emptiness"
he carried
"mind only"
vijnaptimatra

The hump-backed flute player
Kokopilau
his hump is a pack.

2.

In Canyon de Chelly on the North Wall up by a cave
is the hump-backed flute player laying on his back,
playing his flute. Across the flat sandy canyon wash,
wading a stream and breaking through the ice, on the
south wall, the pecked-out pictures of some Mountain
Sheep
with curling horns. They stood in the icy shadow of
the
south wall two hundred feet away; I sat with my
shirt off in the sun facing south, with the hump-
backed flute player just above my head.
They whispered; I whispered; back and forth
across the canyon, clearly heard.



about a well being put in the ground 20 miles away from their homes, or to condemn a solid-waste disposal put in a seemingly dry sandy wash 15 miles upstream from their fields. While such acts of resistance are relatively rare today, they nevertheless suggest that traditional Papago recognize that their agriculture is watershed-sensitive and that their responsibility goes beyond simply tending to their own field and houseyard. Although the entire watershed may not belong to them, in a very real way they belong to it.

There is increased public awareness of the problem of species extinction and loss of genetic diversity in both wild and cultivated or tended biota. But only a few analysts of this dilemma, such as Steve Brush,[6] have related that the remaining genetic diversity is dependent upon the persistence of a variety of agricultural ecosystems, each finely tuned to its geographic setting and ecological context. These agricultural ecosystems have in turn coevolved with various cultural groups, whose ethnicity, or distinctive ways of dealing with particulars, are now being consumed by modern media-mediated monomania. As ethnic communities become acculturated, losing their *other-ness*, the Earth loses part of the diversity of its life-support system. Ironically, an elderly Sand Papago woman has used the analogy of distinctive seed stocks to describe the fate of her people:

> It is this way, long time ago, when people first realized the world, from that time on it is recognized from their maker that people who bore children . . . band together. People were like a cultivated field producing after its kind, recognizing its kinship, the seeds remain to continue to produce. Today all the bad times have entered the People, and the People no longer recognize their way of life. The People separated from each other and became few in number. Today all the People [*O'odham*] are vanishing.[7]

In Mexico, Victor Toledo, Christina Mapes, and their colleagues have warned that their country

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3.

In the plains of Bihar, near Rajgir, are the
ruins of Nalanda. The name Bihar comes from "vihara"
—Buddhist temple— the Diamond Seat is in Bihar, and
Vulture Peak—Tibetan pilgrims come down to these
plains. The six-foot-thick walls of Nalanda, the
monks all scattered—books burned—banners tattered—
statues shattered—by the Turks.
Hsüan Tsang describes the high blue tiles, the delicate
debates; Logicians of Emptiness, worshippers of Tārā,
Joy of Starlight, naked breasted, "She who saves."

4.

Ghost Bison, Ghost Bears, Ghost Bighorns, Ghost Lynx,
Ghost Pronghorns, Ghost Panthers, Ghost Marmots, Ghost
Owls:
Swirling and gathering, sweeping down, in the power
of a dance and a song. Then the "White Man" will be gone.

Then the butterflies will sing
on slopes of grass and aspen
thunderheads the deep blue of krishna
rise on rainbows; and falling shining rain—
each drop—
tiny people gliding slanting down: a little Buddha
seated in each pearl—
and join the million waving Grass-Seed Buddhas
on the ground.

5.

Ah, what am I carrying? What's this load?
Who's that out there in the dust
sleeping on the ground?
with a black hat, and a feather stuck in his sleeve.
—It's old Jack Wilson,
Wovoka, the prophet,

Black Coyote saw the whole world
in Wovoka's empty hat

the bottomless sky

the night of starlight, lying on our sides

the ocean, slanting higher

all manner of beings
may swim in my sea
echoing up conch spiral corridors

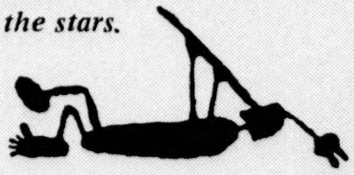
the mirror: countless ages back
dressing   or laughing

what world today?

pearl crystal jewel
taming and teaching
the dragon in the spine—
spiral, wheel,
or breath of mind

desert sheep with curly horns.
the ringing in your ears

is the cricket in the stars.



6.

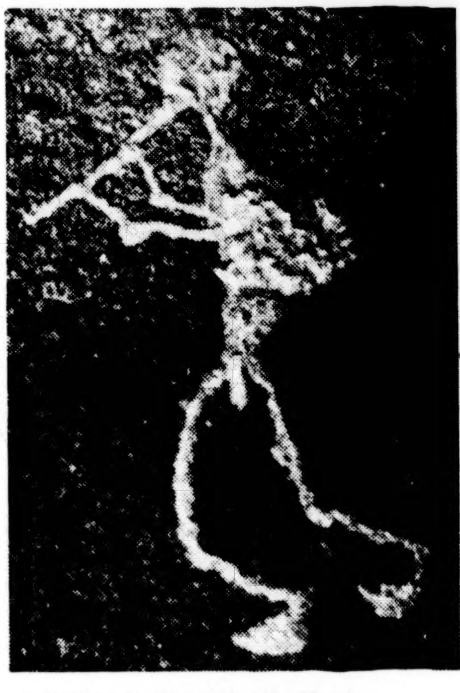
Up in the mountains that edge the Great Basin
it was whispered to me
by the oldest of trees.

by the oldest of beings,

the Oldest of Trees.
Bristlecone Pines.

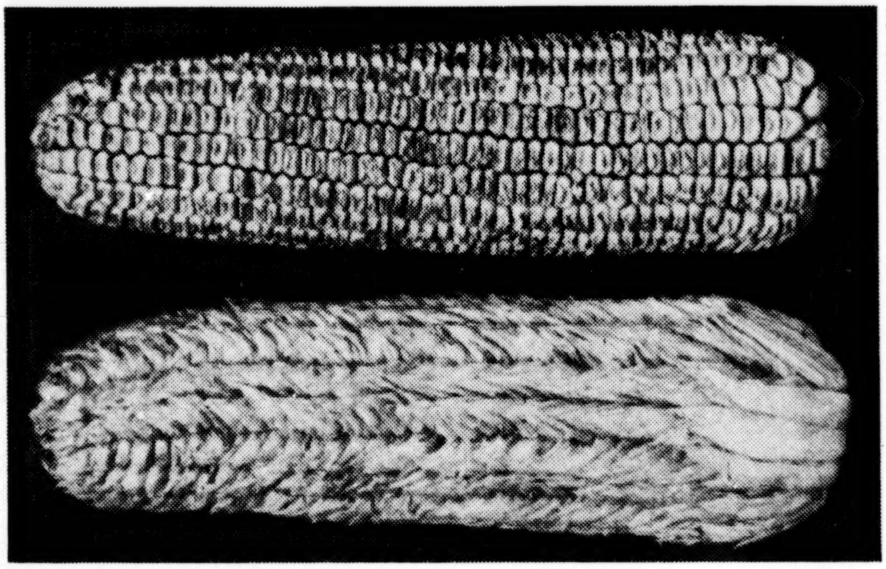
and all night long, sung on,
by a vast throng
of Pinyon Pine.

■



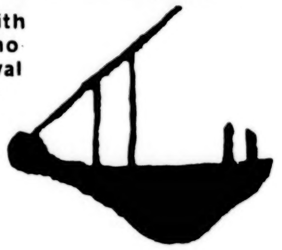
HUGH C. CUTLER IN THE JOURNAL OF HEREDITY, OCTOBER 1944

A Pueblo Indian petroglyph of Kocopelli from the upper reaches of the Glen Canyon, photographed in 1942.



HUGH C. CUTLER IN THE JOURNAL OF HEREDITY, OCTOBER 1944

An ear of Bolivian Indian podcorn (below) compared with an ear of ordinary corn. The podcorn survived despite no support from established agronomists. At first its survival was attributed to repeated mutations; then Hugh Cutler realized that Indian medicine men had perpetuated and distributed it.



will fail to feed itself as long as it tries to impose one kind of agriculture on an ethnically and geographically diverse land. Instead, they should begin with the existing agricultural ecosystems that indigenous cultures have evolved, and develop a number of local or regionally adapted food production strategies based on this diversity.[8] Crying "food first" is not enough, especially if it imposes inappropriate food production systems on the land.

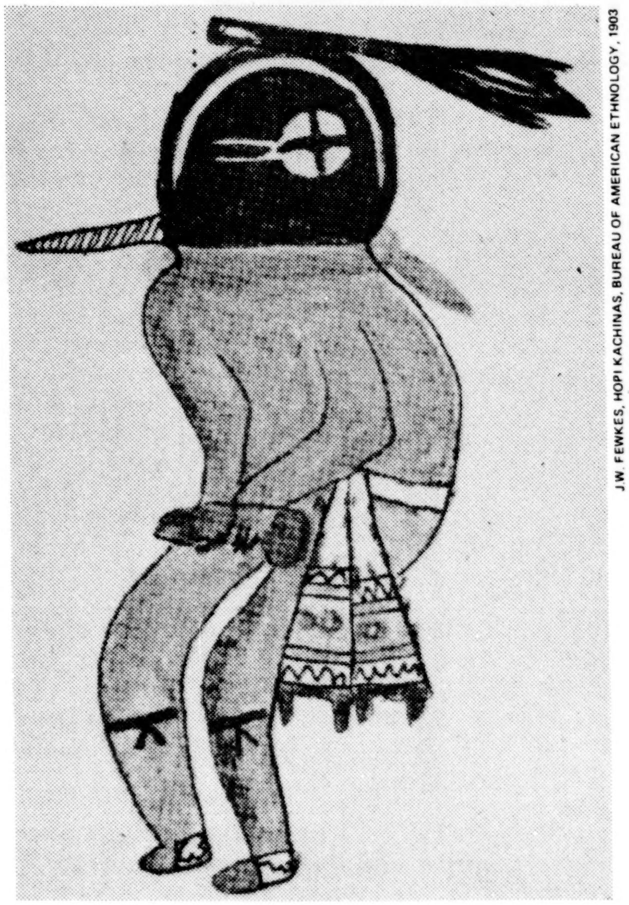
Today, genetic engineers tell us not to worry about the drying up of indigenous gene pools, for they will soon create new genetic combinations faster than they can evolve in nature. Engineers tell us not to worry about falling groundwater levels and the rising costs of fueling pumps, for they will create solar pumps to extract the presumably infinite amount of water below the Earth's surface. Sociologists tell us not to worry about the demise of traditional cultures, that new lifestyles and religious cults are cropping up every day. Yet these are artificial and ephemeral in the sense that they are "components" without contexts, creations without long-term fitness. To accept these cheap substitutes while letting twelve thousand years of organic agricultural experimentation slip away means not only that we will lose a rich agricultural heritage but that we will diminish our options for the future as well.

As I was pulling together these thoughts, I realized that perhaps the native-crop-conservation effort needs a guardian spirit in the sense that St. Francis has become the patron saint of the ecology movement. A fitting candidate may be the humpbacked flute player, who has been seen on petroglyphs near agricultural fields in the Southwest for millennia. His flute has been considered a cloud-blower or drinking tube by some Southwestern peoples, suggesting an association with water-bringing for crops, according to anthropologist Bruce Anderson.[9] It has also been considered a phallus, and he is certainly associated with sexuality and fertility for both humans and plants. What is striking is that so many observers have imagined his hump to be a bag of seeds. For instance, Gary Snyder has called him an "itinerant seed carrier." Forest Roth-Shomer of the Abundant Life Seed Foundation (**NWEC** p. 100) has for years modelled not just his appearance but his activities after this archetypal seed carrier. Forest travels throughout the Pacific Northwest with a flute in hand and a bagful of seed-collecting equipment on his back. As he hikes, he harvests seed, and has brought dozens of species into commercial distribution through his efforts.

Perhaps the most remarkable connection was made by ethnobotanist Hugh Cutler in the 1940s in an essay, "Medicine Men and the Preservation of a Relic Gene in Maize."[10] He noted that flute-playing, pack-carrying medicine men in South America have for centuries used a very rare form of maize, podcorn, for the cure of respiratory ailments. The irony is that podcorn cannot survive without diligent care from humankind – every kernel has its own tightly held husk and is also enclosed by the larger papery husks surrounding the entire cob. When expressed in most maize varieties, it does not breed true. Over millennia, most farmers have likely destroyed or neglected this relic gene if it shows up in their cornfields, due to the extra work involved in maintaining it. Yet Callahuayo and Quichuan medicine men have taken care of this relic gene, as well as carrying it with them to other cultures. These wandering South American herbalists are known to have reached into Central America historically. Perhaps more importantly, podcorn persists today in South America where it was first recorded nearly two centuries ago.

What Hugh Cutler noticed is that where podcorn crops up in prehistoric sites in the Southwest, it is often near petroglyphs of the humpbacked flute player! He speculated that the same line of indigenous medicine men who were responsible for the persistence of a relic gene of maize over centuries may also have transported it from one continent to another. The South American herbalist with his *flauta indigena* and the Hopi's Kokopelli may carry the same grain.

The trouble is, Kokopelli is not exactly "saintly" in Southwestern Indian myths and ceremonies. He has been known to "hump" little girls and even old anthropologists. I mentioned this dilemma to Gary Snyder; he smiled, replying, "It all goes back to fertility." ■



J.W. FEWKES, HOPI KACHINAS, BUREAU OF AMERICAN ETHNOLOGY, 1903

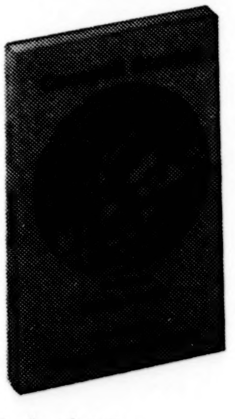
A drawing by a Hopi artist of a Kachina dancer, wearing a painted mask representing Kokopelli. Ethnologist and Hopi priest J.W. Fewkes wrote: "The head is painted black and has a white median facial line. . . . There is a warrior feather on top. The body is black and girt by an embroidered sash. There are buckskin leggings, stained yellow and green."

Notes

1. Wendell Berry, **The Gift of Good Land**, p. 280. (Reviewed in Summer '82 **CQ**.)
2. Harry W. Lawton and Phillip J. Wilke, "Ancient Agricultural Systems in Dry Regions," in **Agriculture in Semi-Arid Environments**, pp. 1-43, A.E. Hall, G.H. Cannell, and H.W. Lawton, editors, 1979, $56 postpaid from Springer-Verlag New York, 175 Fifth Avenue, New York, NY 10010.
3. Calvin Martin, **Keepers of the Game**, p. 186; 1978, $12.45 postpaid from University of California Press, Order Dept., 2223 Fulton Street, Berkeley, CA 94720.
4. George W. Cox and Michael D. Atkins, "Agricultural Ecology," **Bulletin of the Ecological Society of America** 56 (1975), p. 6.
5. Gary Paul Nabhan, **The Desert Smells Like Rain**, reviewed on page 26 of this issue.
6. Steven Brush, H.J. Carney and Z. Huaman, "Dynamics of Andean potato agriculture," **Economic Botany** 35 (1981), p. 70.
7. Filamena Bell, Keith Anderson, and Yvonne G. Stewart, **The Quitobaquito Cemetery and Its History**, Western Archaeological Center, National Park Service, Tucson, 1980.
8. Victor Toledo, J. Carabias, Cristina Mapes, and C. Toledo, "Criticadelaecologia politica," **Nexos** 4 (1981), p. 17 (Mexico City).
9. Bruce Anderson, "Kokopelli: The Humpbacked Fluteplayer," **American Indian Art** (1976), p. 36.
10. Hugh Cutler, "Medicine Men and the Preservation of a Relic Gene in Maize," **Journal of Heredity** 35 (1944), pp. 291-294.

Cocopeli Stories

Here are tales that come off the tongue as if they have been told aloud many times. As Coyote has made a comeback on this continent, he has brought his friends along: Spiderwoman and the Humpbacked Flute Player. In this book, these three mythic characters intermingle in magical, humorous stories for each season. Solala Towler says that Cocopeli's hump is a "pack wherein he carries seeds and gifts he dispenses to the worthy." These stories too are little gifts. —*Gary Nabhan*

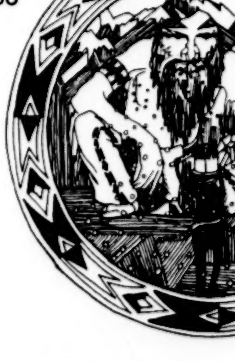


Cocopeli Stories
Solala Towler
1982; 88 pp.
$4.95 postpaid from:
Cyote Press
Box 101
Deadwood, OR 97430

•

Cocopeli played on and on,
and if he hadn't been so lost
in his song
he would have heard the sound
of water dripping off the branches
all around him,
or the steady thumping
as huge loads of snow
slid off the tired limbs.
Little by little
the snow receded,
revealing tiny patches
of new green grass,
which got bigger and bigger
as more of the snow melted . . . .
One by one
birds started joining in
on Cocopeli's song
until there was a whole chorus
cheeping right along.
The other animals started peeking out
from behind the bushes and trees.
They were all overjoyed
that Spring had finally come
to their part of the forest.
Very timid and frightened at first,
they come out into the clearing
where Cocopeli stood playing,
still unaware
of the effect of his music.

When Cocopeli stopped
he found himself surrounded
by happy thankfull animals
and all the snow and cold gone.



Cocopeli confronts Old Man Winter

He looked around, astonished,
until he realized what had happened.

A great Elk,
who was one of the bravest
of the forest dwellers,
summoned up her courage
and stepped forward.
"We who dwell in this forest
thank you," she said,
"for chasing away the Long Winter."

DEFORESTATION

A tree-planter's moral dilemma

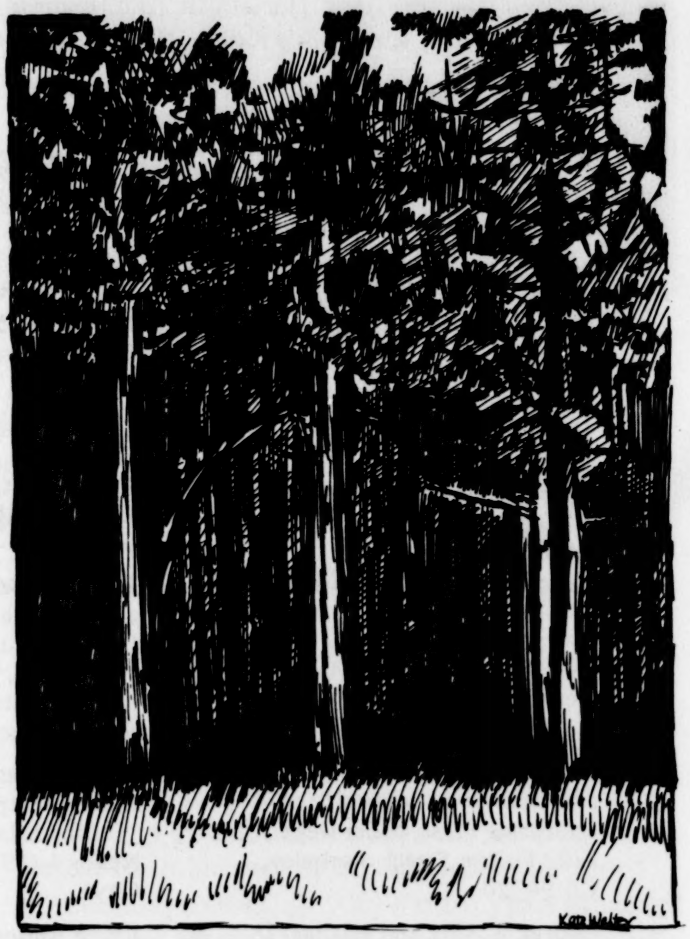
by Peter Beckstrand
Drawings by Kate Walter

FIRST OF ALL, I want to make very clear that I think planting trees is one of the most unequivocally good things a person can do for the Earth, for themselves, for everyone. And the more I study the literature on trees, the more I understand how important they are and how much more we do not understand yet about them and their roles in the life of the Earth community.

Tree planting opened up a whole new world for me: soil membership and its responsibilities and relationships; the hoedad as a satisfying and appropriate hand tool; the responsibilities of a communal work situation; the struggle for economic democracy (or conversely, the resignation and degeneration into a more American feudal business approach); and the whole load of baggage that goes with living on the road.

But what has struck me most is that somehow, things aren't quite coming together for the trees. They are "crops" for one thing. It takes from 40 to 80 years to harvest the red pine of the Great Lakes area, just 20 years for the loblolly "supertree" hybrid pines of the south. Crops to feed the staggering waste of the packaging industry and the Sunday paper.

As crops, the trees are farmed similarly according to the standards of post-war American agriculture. Large tracts of monoculture stands. The soil primed with fertilizer and herbicides (pine seedlings do poorly in competition with grasses). Soil is "terrain" to be considered in relation to vehicular movement, not the lifeblood of the planet.



Pine Plantation **About 600 trees per acre, planted in rows: "spindly, thin, small-topped, and so insubstantial that a good hard frost can bow some of them over like saplings bent for a rabbit snare."**

The implications are as dangerous for forests as for the Dustbowl farmers. Monoculture is extremely vulnerable; imagine what will happen in red pine or loblolly forests if a new pest or disease appears like white pine rust or Dutch elm disease or chestnut blight. Millions of acres are on the chopping block.

What is less obvious (and evidently taking us several millennia to learn) is what happens when we shrug off membership in the soil community, that is, ignore soil building and instead treat soil as if it

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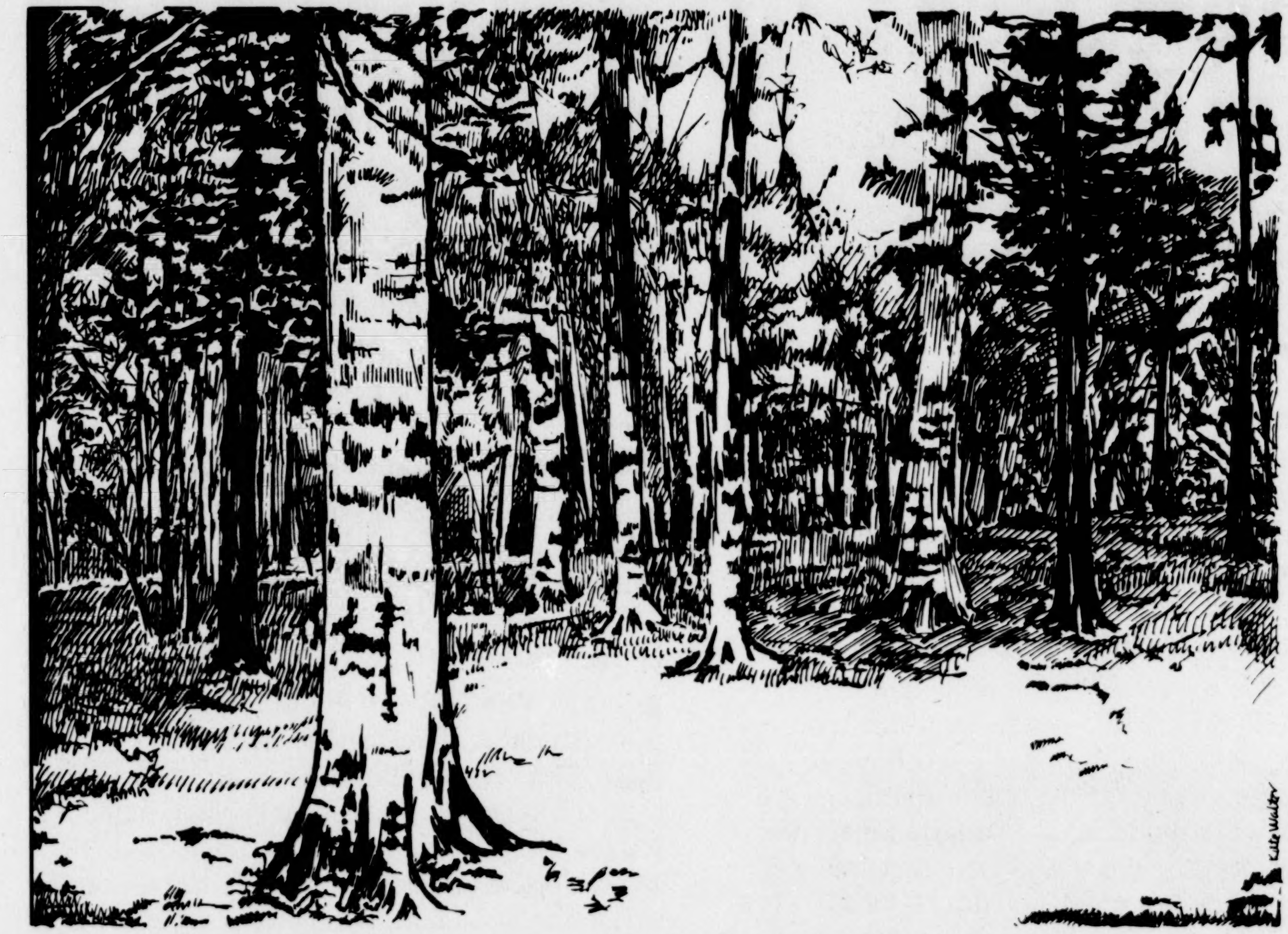
"My tree-planting experience covers two seasons," says Peter Beckstrand, "during which time I managed to plant trees in Arkansas, Mississippi, Kentucky, Texas, upper Michigan, and northern Wisconsin. I'm about to embark on my second season of apple picking and in between times I've worked in truck gardens, cleared river logjams for a canoe rental outfit, taken buildings apart, painted buildings, hayed, harvested tobacco, driven horse and mule teams, and generally have managed quite successfully to stay out in the sun and rain since I walked away from my ten years in the newspaper business."

As you'll see, this article pleads for comment from the tree-planting community. One such comment follows from British forester Philip Stewart, who discoursed on coppicing-with-standards in the Summer 1981 CQ, and who discourses on cultural evolution on page 46 of this issue. Both writers call for better handling of paper wastes; for the latest word on recycling, see page 80.
—Art Kleiner

IN DISGUISE



Beech-Magnolia-Loblolly Pine Forest The oldest association of trees in the Big Thicket region, considered by some to be the climax forest of the area. The hardwoods are generally eliminated during replanting to maximize pine production per acre.

were no more than agar in the petrie dish – a medium for growth – and control only some simple inputs like nitrogen booster shots and immunization from grass competition.

THE TIP OF THE ICEBERG is in view. At a congressional hearing on "multiple use" in national forests in 1971, Dr. Robert Curry of the University of Montana charged that "clearcutting so depletes the soils of nitrogen and other nutrients that two or three crops of timber may be all that can be expected in many areas before they are made utterly barren."[1] Curry suggested rotating pine with leguminous trees to restore nitrogen. He also suggested that clearcutting might be feasible in the flat lands of the South but is "definitely not good in the Western states."

I think Curry's ideas on clearcutting (and nitrogen cycling) extend to the East and South as well. A 1982 University of Wisconsin study "found that production declines recorded by foresters may be related to changes in the cycling of nitrogen in the plants and soil."[2] Two observations from this study are especially interesting – both are contained in the newspaper article which reported on it:

"The research indicated that hardwood forests, dominated by oak or maple trees, establish nitrogen-rich systems in which leaves decay rapidly and nitrogen circulation is facilitated. In contrast, pine forests establish nitrogen-lean settings in which the element accumulates in a slow-decaying needle litter.

"When pine forests are planted on nitrogen-rich former hardwood sites, [Professor John D.] Aber said, there is high wood production in the first generation of trees. But production will tend to decrease as the pines establish an environment with less nitrogen."

The first implication is the basis for the study. Planting pine trees on former hardwood soil is not conducive to long-term cropping of pines (or restoration of hardwoods). Hence, it should be

PETER BECKSTRAND

A crusher paused in its pine-clearing work one Saturday south of Woodville, Texas. Crushers also clear away hardwoods and all undergrowth that isn't considered harvestable timber, producing barren, flat land for planting pine.

avoided unless one wants to walk the road of "production decline" to its logical conclusion.

The second implication is less obvious, but ironical and provocative as we ponder some more iceberg rising into view. Professor Aber again: "Pines degrade the site even though they're producing more on it." Let's play with that irony some more. Hardwoods are very slow-growing trees that create and cycle nitrogen very rapidly. Pines are fast-growing trees that create and cycle nitrogen very slowly. That slow soil-building process of the pine forest indicates to my way of thinking that pine forests are *less* able to tolerate the intensive harvesting practices used for the past century, rather than more able, which is what loggers had guessed form the plain fact of rapid growth, (although the reliance of papermakers on softwood has more to do with machinery than with ecology). In any case, it seems to me the pines are saying the conditions imposed on them by industrial man are less than ideal.

Dr. Richard St. Barbe Baker has made a similar point[3] and he calls tree planting an "emergency" measure when trees are not regenerating naturally.

That's a new idea for most tree planters. But I'll go a step further and suggest that we heart-in-the right-place tree-planting folk are being used to put a nice face on appalling forestry practices and outright deforestation.

LAST WINTER I WORKED in the area of southeast Texas known as the Big Thicket. (My information on its ecology is from **Big Thicket Plant Ecology**, by Geraldine Watson.[4]) It is a unique area characterized as a biological crossroads, and from my perspective as a tree-planter traveling from site to site, it was confusing until Watson's book put it together. The idea of the biological crossroads is that you

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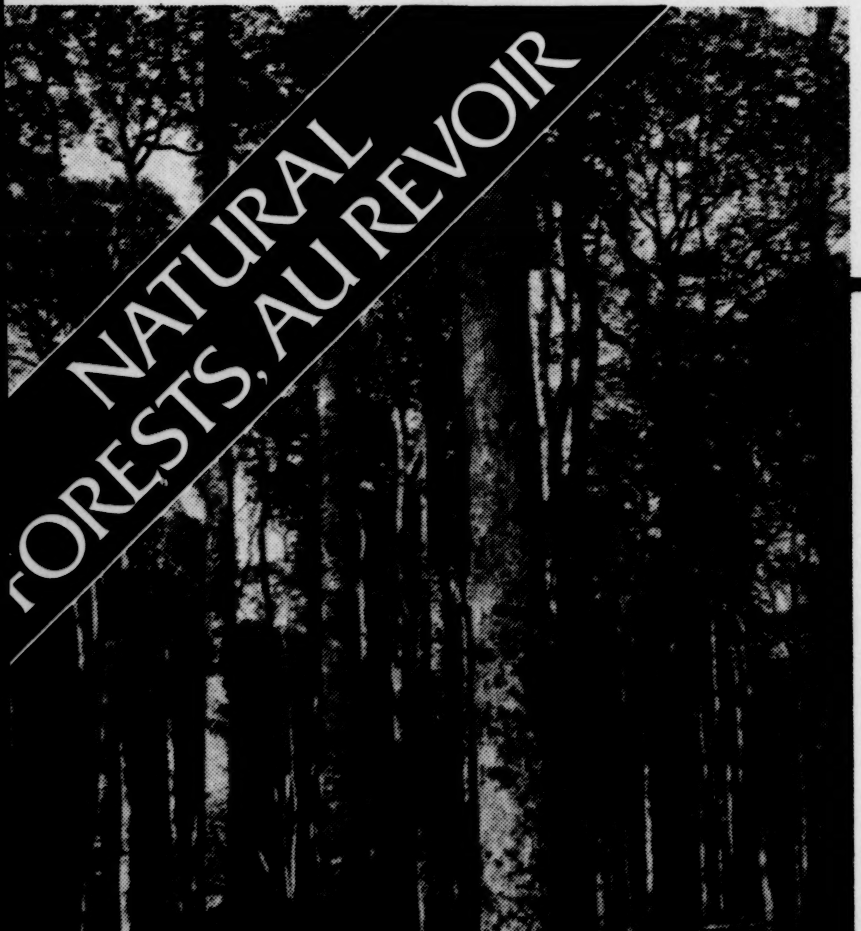
NATURAL FORESTS, AU REVOIR



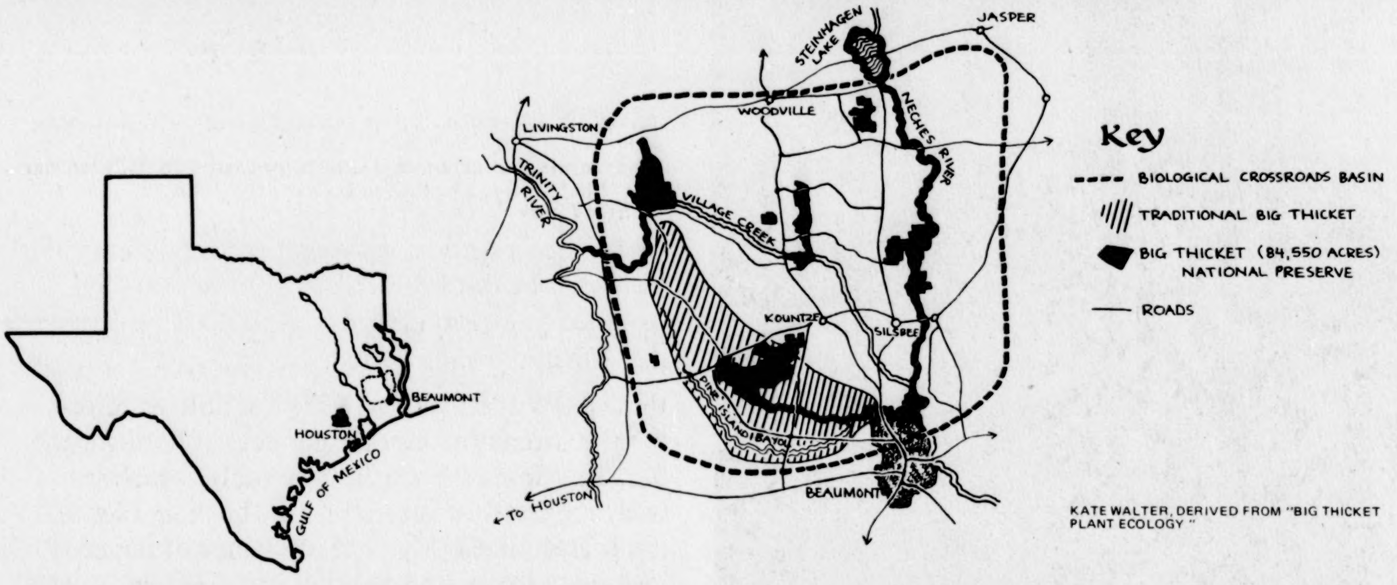
SILVICULTURAL SYSTEMS

The oak forest of Bellême, Normandy. The French (and Germans) developed methods of felling forests gradually, so the trees have a chance to spread out and bear enough seed to regenerate each forest naturally after it is cut.

by Philip Stewart

I WAS DELIGHTED TO read this excellent account of what is happening in North American "reforestation." In fact the word *reforest* should be reserved for the rare cases where an attempt is made to recreate a forest community, complete with a self-sustaining forest soil and a full complement of "useless" species. What usually passes for reforestation should just be called "tree-planting."

What Peter Beckstrand has so clearly seen in America is going on all over the world. Destroying the last vestiges of natural forest is called "scrub-clearance" and is counted as a positive step towards "reforestation." Over



KATE WALTER, DERIVED FROM "BIG THICKET PLANT ECOLOGY"

have a wild diversity created by portions of desert and prairie flora pushing in from the west, woodlands from the north and east, southern marshes and bogs, and coastal influences backing up the bayous.

The shaded area on the map is where much of the trouble lies. This is the "traditional" big thicket: an area of mostly poorly drained soil, Pine Island Bayou, a home for hardwood flats, baygalls, cypress swamps, and titi (tight-eye) thickets (a perpetual shrub-sapling thicket), with year-round standing water throughout.

The pulpwood companies in the area would like to make the Big Thicket pay. So they use huge crushers to bowl over the hardwood flats and the baygalls (they get their name from the primary plant life – sweet bay and gallberry holly) and send in some hoedads. We tried to plant loblolly pine in some dry places, and failing that, in two inches of water or less. We climbed over incredible trashed piles of hardwoods, guaranteed to put any tree planter in a very bad humor. We were stunned at the waste, the raw destruction, and the plain stupidity of putting a lot of energy into planting those pines with the realization that they were not liable to grow. In one place, we were told to make sure we picked up our tree bags (they are bundled in bags of a thousand) because the hardwood flat we were planting was next to one of the large units of the Big Thicket National Preserve. Musn't litter next to the park. Many of the local people nominally in support of the pulpwood industry as a major source of jobs in the area are just as appalled by the destruction of the hardwoods there. In fact it was some local hunters who first pointed out to me the absurdity of the tiny scattered portions of Big Thicket National Preserve being surrounded by crushers bowling over the the hardwoods.

Many of the established loblolly plantations in the South that I have seen are of terrible quality. The trees are far from resembling pictures I have seen of virgin lob or the occasional stouthearted lob one sees from time to time. The trees I see are

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much of Europe things have gone so far that we can only guess what a natural forest would look like. In Scandinavia the process is so ancient that spruce and pine are widely regarded as the naturally dominant species.

And now even in the tropics there is a fevered search for fast-growing plantation species to "replace" the natural forests, whose disappearance is forecast as being complete by the end of the next century. Mimicking their temperate colleagues, tropical experts are putting a great deal of research into tropical conifers. These surely are biological failures, since there are only a few dozen species, occupying small areas, compared with the tens of thousands of species of tropical hardwoods. If these near-extinct conifers are used to plant up large areas of fragile tropical soils, biological disaster is likely to result.

The reason for all this crazy behavior is economic. Resources that exist without having entailed any cost to create them are heavily undervalued in relation to human-made assets. The market values a forest as the sum of its land price and its timber price. If future generations of trees enter the calculation at all it is usually at absurdly high discount rates that reduce most future benefits nearly to zero. True forestry – the husbanding of natural forests – has now almost disappeared from the world. It is still to be seen at its best in France, where it has been going on as a scientific art for three hundred years. If the rest of the world is to rediscover forestry, we must first remake economics.

Bibliography

Sorry, there's nothing easy to get hold of in English about French forestry. I only know of:

Studies in French Forestry by T.S. Woolsey; 1920; John Wiley and Sons, N.Y.

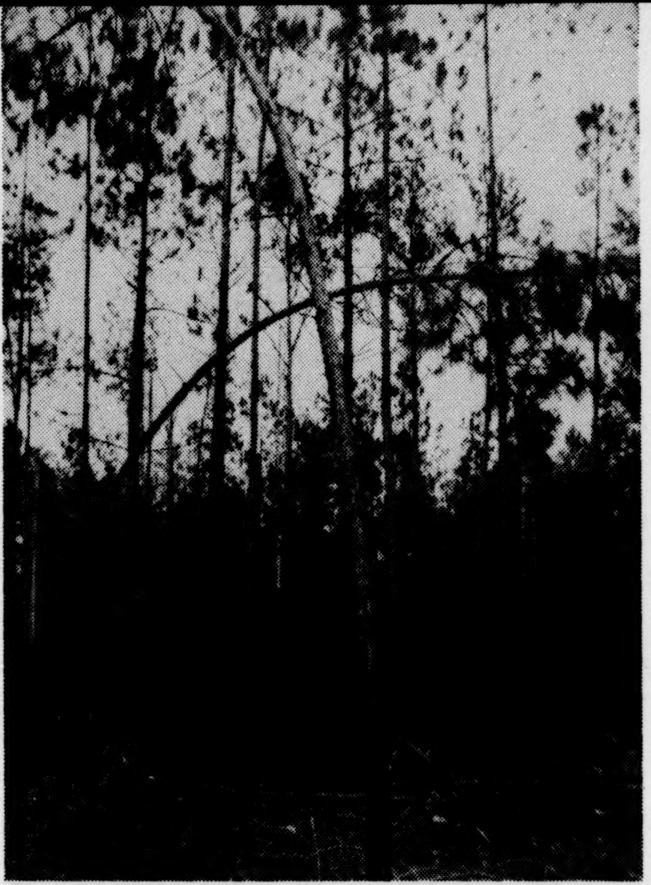
Being an American book it's perhaps easier to find on your side of the water.

Silvicultural Systems by R.S. Troup; 1952; Oxford University Press.

The best work on the kind of systems developed by the French.

Guide des Forêts de France by G. Plaisance; 1961; la Nef de Paris Editions, 25 Rue des Boulangers, Paris 5°.

A good little book in French. I think the fact that there are so few English books – and none up-to-date – reflects the general tendency of English-speaking foresters to be interested in industrial tree-planting rather than seminatural reforestation. ■



The hard freeze of early January, 1982 caused these weak pines to bend over.

spindly, thin, small-topped, and so insubstantial that a good hard frost can bow some of them over like saplings bent for a rabbit snare. A forest full of those looks pathetic and sickly.

I BEGAN MY TREE-PLANTING WITH naive ideas about reforesting America. I am coming round to the idea that now that we have just about cut all the old-growth forest down, we are beginning to discover how important old-growth forest is to the life of the soil and the continuity and stability of both the forest itself and the surrounding climate. And I'm thinking that clearcutting and quick-cropping pine on short rotations (20 to 80 years) is turning out to be a road to deforestation so complete it is truly scary. (Tree-planting is done to restore worn out farm land. What do you plant to restore worn out forest land? Coast to coast people?)

While planting in the Nicolet National Forest in Wisconsin this spring, several of us went to see a 400-year-old white pine (for some odd reason named for General Douglas MacArthur) that was somehow missed by the loggers of the cutover era. It's a sort of offbeat tourist attraction, but a quiet spot. We stood there looking up at it trying to imagine a whole forest of them and that's when it started to really sink in and I thought, jeez, how many grocery bags can they make out of that?

How can we get old-growth forest back in North America? By cutting fewer and fewer trees, and the start of that is to say, "Thanks, I don't need a bag" when you go to the store, taking a basket to the grocery like the old ladies do, and going to the library instead of the bookstore, and sharing your Sunday paper, and staying the hell out of those discount stores that won't let you leave without a bag, and recycling all the paper you can and then patronizing those who use recycled paper. That would be a good start.

As for tree-planters, we've got to stop kidding ourselves about the wonderfulness of reforesting America and getting paid well to do it because yes, it is too good to be true.

NOW I HAVE PAINTED MYSELF into a handy dandy corner of moral dilemma. Should I continue to participate in industrial reforestation? Should I go back to Texas and the Big Thicket? My first reaction was no. But I have gradually decided that when I finish pruning apple trees in one of the orchards here at Gays Mills, Wisconsin (that is, January 1983), I will go to Texas and plant trees again.

Why? I'm not sure, except that my mental tally of pros and cons seems to be leaning toward pro right now. I remind myself that the destruction of hardwood flats, titi thickets and baygalls represented only about 400 acres of our 4500 acre contract. Perhaps I'm rationalizing. But I keep thinking of Richard St. Barbe Baker describing tree planting as an 'emergency' task and I wonder if bad reforestation isn't better than none at all. Moral dilemmas are such that you can't worm your way out of them and feel satisfied with *any* decision you make.

A friend of mine shook her head as she read this article. "It's all so hopeless," she said. "Maybe someday we'll all look back on this era as too negative and realize that things weren't really as bad as we thought." I would put that a different way. Both the Gaia philosophy and the Entropy Law, it seems to me, imply that if we will only *back off* for a while on our intensive exploitation of the North American forests, let the naturalists watch and catalogue and lock the specialists in their labs, we could see a rebound that could be quite dramatic but is, at this point, impossible to foresee clearly. That could make it *appear* that we had been too negative.

But that prospect is largely why I wrote this article in the first place. I want to know what other people, especially other tree planters, are thinking about what they have encountered in American forests. I know there are many tree planters who have done research also. I'd like to hear from people. Possibly there could be a follow-up article or letter to keep some sort of tree-planter dialogue going. ■

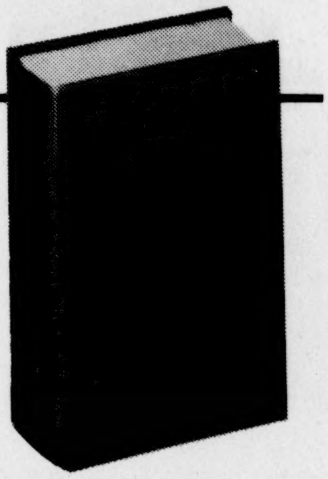
Footnotes to **Deforestation in Disguise**

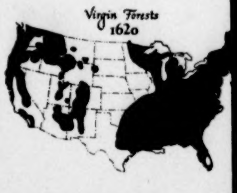
1. From **Clearcut** by Nancy Wood, out of print from Sierra Club Books, San Francisco.
2. **Wisconsin State Journal**, Madison, June 7, 1982.
3. "A Man of the Trees," by Edward Goldsmith, **CoEvolution**, Spring, 1980, p. 66.
4. "Big Thicket Plant Ecology" by Geraldine Watson, 1979, 65 pp., $6.25 postpaid from Southwest Parks and Monuments Association, c/o Big Thicket National Preserve, P.O. 7408, Beaumont, TX 77706.

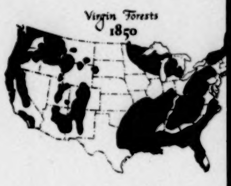
The Great Forest

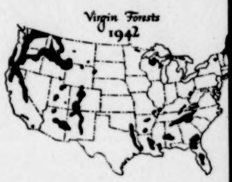
Here it is. The sequoian, folksy prose. The unabashed telling of lumber camps, timber barons, labor troubles, bow saws, woodcraft and "Woodman, Spare That Tree." A history of our virgin forests, their demise and the ever-recurring conservationist-preservation-industrial dialogue of America. A dialogue still fought bitterly though the acreage is vastly shrunk. I cannot recommend a book more passionately to those citizens in love with the scattered remains of our Great Forest. —*Peter Warshall*

The Great Forest
Richard Lillard
1947, 1973 2nd Edition;
452 pp.
$45 postpaid from:
Da Capo Press
233 Spring Street
New York, NY 10013









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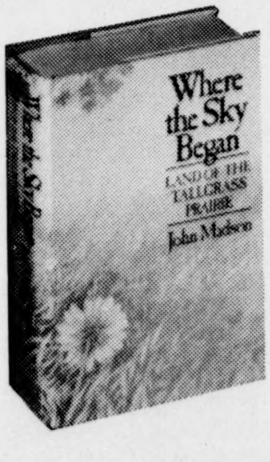
By and large the one basic test the land hunter applied was to study the vegetation. He saw the trees not as timber but as soil gauges. The denser the shrubbery, the bigger and more numerous the trees, the faster their rate of growth — the better the soil. Idiom very early distinguished land by the species on it: pine land, oak land, hickory land, sugar tree and black walnut loam. In Georgia, rising ground bearing oak and hickory was found "by Experience to produce the best Crops of Indian Corn, and most Sorts of Grain." In Virginia, land bearing "oak trees, huge Timber trees, and two foot black mould" was best for tobacco planting. In general throughout the Great Forest, white oak and chestnut lands were good for corn at once, but would raise grass and small grains only after plowing and hoeing. Pitch pine land, dry and sandy, would bear corn and rye but soon wore out and had to lie fallow. Always wet and cold, soft maple and white birch land was not worth clearing. Sassafras, persimmon, gum, and chestnut oaks warned of inferior soils. Spruce and hemlock grew in a thin cold soil with a tough sward called a rug that had to be burned; then the soil would plow and support good grass. Beech and maple trees stood as signs of the most easily cultivated land, warm, rich, and loamy. Without plowing, such soil raised grass, corn, and small grains the very first year, and after that could be converted at will to grass and clover pasture. Men were excited at the promise of maple lands. Young George Washington wrote: "We went through most beautiful Groves of Sugar Trees and spent the best part of the Day in admiring the Trees and richness of the Land." Ash, elm, black and yellow birch, honey locust, red mulberry, shellbark hickory, pecan, walnut, pawpaw, buckeye, coffee tree — with local variations all these signified deep rich soil. The bamboo-like cane, growing in big thickets above the flood level of the rivers, was sure evidence of good rice and corn land. All these distinctions gained legal status in a number of commonwealths.

Where the Sky Began

To truly experience the prairie Midwest is to tap into a unique spirit of land and people and to feel that for a moment your soul has been touched, leaving you transformed. In **Where the Sky Began** *John Madson gives a detailed description of every aspect of the prairie Midwest: early exploration and settlement, geological influences, biological and botanical components, meteorological effects, soil classification, personal and social characteristics of early settlers as well as present day inhabitants complete with personal anecdotes and even a careful description of how to grow one's own backyard "prairie." The outstanding and important thing is that through all of his scientific, historical, and sociological information he allows the soul of the prairie to shine through.*
—*Susan E. Sattler*

Where the Sky Began
(Land of the Tallgrass Prairie)
John Madson
1982; 295 pp.
$14.95 postpaid from:
Houghton-Mifflin Company
Wayside Road
Burlington, MA 01803
or Whole Earth Bookstore



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I could never take Druids seriously. They're not in the same class as Cossacks, Zulus, Masai, Mongols, Comanches, Sioux, the highland clans of treeless moors, and trail drovers tearing up Front Street. Grasslanders, all. There was a vein of wild exultation in such men. It wasn't just the high-protein diet, nor even that some of those men were mounted — although the horse people were among the wildest of all. I have a hunch that it was the mood of the land, stimulating its people with openness, hyperventilating them with freedom in a world of open skylines and few secrets. Such grasslanders never seemed to harbor the nasty little superstitions that flourish in fetid jungles and dank forests. Their superstitions were taller, their sagas and legends more airy and broad, and running through their cultures was a level conviction that they were the elite.

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A tornado funnel is horror itself, and its setting compounds the effect — a witches' sabbath of storm, the stricken countryside glowing eerily under that bruised sky of angry green, deep saffron, and purple in a fearful half-light. Accompanying this is what used to be described almost universally as "a roar like a thousand freight trains," an analogy that was brought up to date by one of our Kansas friends who compared it to "every jet in North America doing Mach II at low level across the prairie." The ominous, elemental roar of air gone mad.

Most tornados do little damage. But when they do swing briefly through towns or farmsteads, their havoc is incredible. Structures are torn to matchsticks by the tremendous winds, and it has been speculated that buildings may also be exploded by the great differential of air pressures within the tornado and the buildings. It has even been speculated that this may be responsible for de-feathered chickens that are sometimes found wandering, naked, and confused, in the wakes of tornados. That is, it was thought that their feathers may have been blown out by an instant reduction of air pressure. In an effort to learn more about this, a chicken was once fired from a cannon at 340 miles per hour. The chicken lost all its feathers but its body was torn in the process — something that might not have happened in a tornado in which the bird might be stripped but otherwise undamaged. Anyway, it was concluded that a chicken's feathers are more likely blown *off* by a tornado than blown *out*.

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Some farmers still speak of native grass as "horse hay" with the inference that it's not respectable cattle feed. They forget that their grandfathers who fed cattle a simple fattening ration of clean water, salt, yellow corn, and prairie hay found that individual gains were seldom less than three pounds per day. We've come a long way since then. Now, with protein supplements, chopped clovers and bromes, mixed commercial feeds and expensive minerals and supplements, gains often range from 1½ to 2½ pounds per day.

RUNNING · OUT

4200 Years of Wood Shortages

by John Perlin and Boromir Jordan

FROM THE BRONZE AGE to nineteenth-century America, every civilization has relied on wood. It served as the primary fuel and building material. In its raw form and converted into charcoal, it provided people with fire. Without artificial heat provided by fire, men could never have survived, much less flourished, in northern latitudes. Rich and poor, cave man and Stuart gentry, heated their homes and cooked their meals using wood-based fuel. Fire permitted humans to extract metals from rock and to shape these metals into usable tools and implements of war. It made the potter's trade possible, too. Other manufacturing processes that needed heat also relied on wood-fuel: seawater or brine was evaporated by heating it in pans; potash and sand were melted into glass; bread, bricks, lime, and tiles were baked in ovens; cauldrons and vats needed heat to make alum (a mordant necessary for dyeing), saltpeter (for gunpowder), and soap, and to dye fabrics and scour wool.

Transportation would have been unthinkable without wood. Wooden ships dominated the seas from the Bronze Age until the American Civil War. Carts, chariots, and wagons were all made from wood as were their wheels. Wood also fueled the early steamboats and railroad locomotives in the United States. Woodcutters provided the material for bridges, jetties, piers, and railroad ties.

Wooden beams propped mine shafts and formed the supports for every type of building. Past generations built their primary power sources – the water wheel and windmill and their accompanying multitude of gearing – from wood. Craftsmen formed tool handles, ploughs, looms, furniture, barrels, and casks out of wood.

In sum, wood was the foundation on which past societies stood. Without this resource, civilization, as our ancestors knew it, would have failed. Forests were their oil fields. "Better be without gold," said John Evelyn to Charles II's privy council, "than without timber."

With such demands for wood, societies invariably experienced shortages. How did these shortages affect internal conditions and foreign affairs? What were the economic repercussions when an essential and formerly cheap material rose astronomically in price? How was the natural environment and the food and water supply affected when the forests disappeared and the land eroded? What solutions (e.g. laws) did societies find for these problems? Or were they condemned to decline and collapse?

CRETE: FROM SELF-SUFFICIENCY TO DEPENDENCE
2400 B.C.–1450 B.C.

EVIDENCE UNCOVERED by archaeologists demonstrates that Crete was heavily forested during certain periods in the Bronze Age. Frescoes which were done about 1800 B.C. (**Figure 1**) indicate the occurrence of certain plants, no longer growing on the

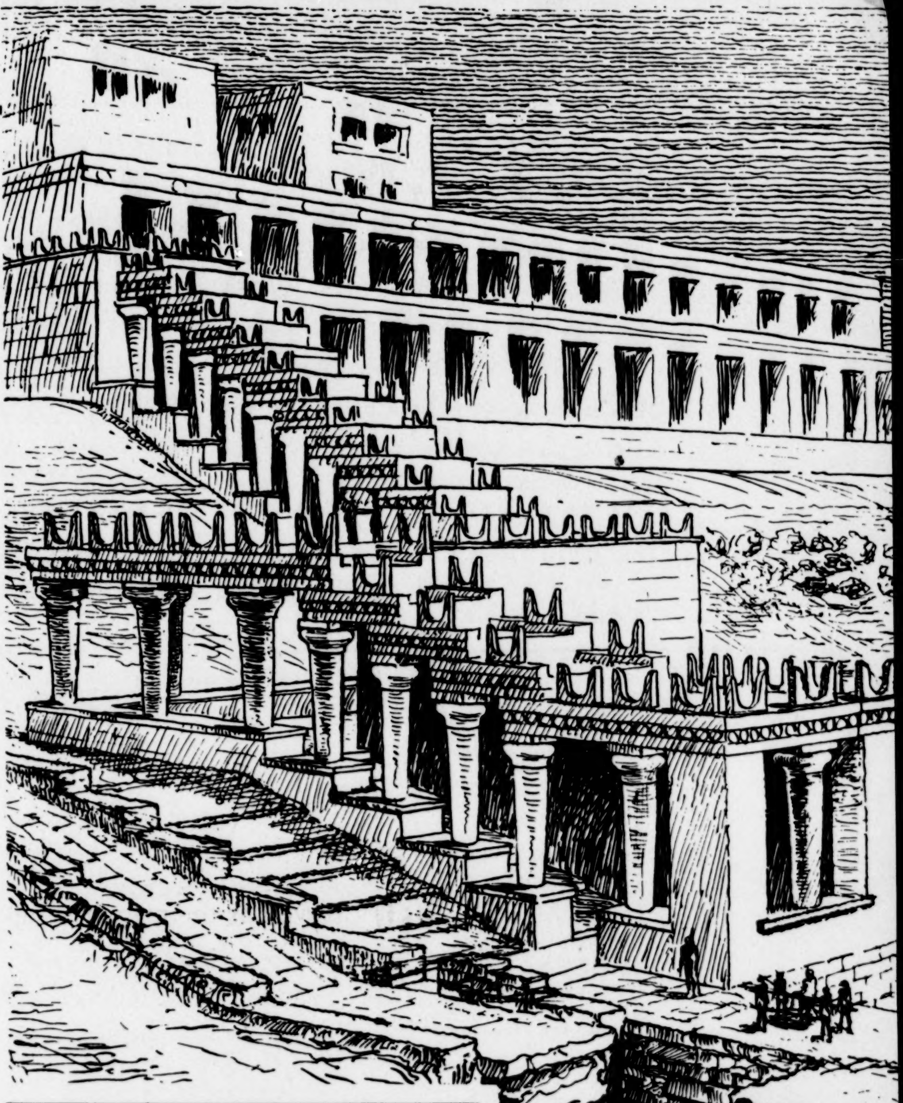
Through history human tree use has too often meant tree abuse. Here is the "Roots" story of deforestation, coauthored by John Perlin, who also coauthored **A Golden Thread**, *the history of solar technology which we excerpted back in 1977-79 and then reviewed (*NWEC *pp. 187). While researching that book Perlin met U.C. Santa Barbara Classics Professor Boromir Jordan. "I was running around like a disreputable hippie, looking for evidence of solar tech in Ancient Greece, and Boromir was the only one willing to help us out." The authors hope that* **Running Out** *will also become a book; anyone interested in publishing it before there's no more paper to print it on can contact them c/o* **CQ**.

–Art Kleiner

island, which are associated with a more humid climate than exists today on Crete. This suggests the existence of forest belts, which facilitate a greater retention of dew and rain. Also, a seal (not shown) from the second millennia B.C. refers to the exportation of timber. Most likely this wood was bound for Egypt.

Great quantities of wood were used in construction. In private dwellings, the homes were framed by wooden beams running horizontally and vertically (shown in the fresco in **Figure 2**). Palace columns shown here consisted of entire trees. Builders placed them upside down to avoid sprouting and to permit water drops from the wider capitals to clear the narrow base, preventing woodrot. Massive cypress beams, sometimes spanning a distance of 16 feet, held up the ceilings in these palaces. (Two thousand years later archaeologists found vast voids in the interspaces of the ceilings, containing massive deposits of crumbling charcoal.)

As Crete became wealthier, its population grew. New settlements encroached on virgin forest land. Also, more people had to be fed. Forests were therefore cleared to make way for cultivation. More firewood was needed for heating and cooking. And greater prosperity put increased demands on the bronze foundries which used charcoal as their fuel. Building and trading activities also burgeoned. Such growth also required large amounts of timber. Changes in building style point to growing wood shortages by 1700 B.C. Carpenters began to economize in their use of wood. They omitted upright posts in the interior walls and used inferior wood for beams. For wood doorjambs, backed by rubble masonry, craftsmen now substituted doorjambs of solid gypsum. Wood scarcities forced Cretans to rely on timber imports, probably from Sicily, mainland Greece, and Cyprus.



THE PALACE OF MINOS AT KNOSSOS BY SIR ARTHUR EVANS

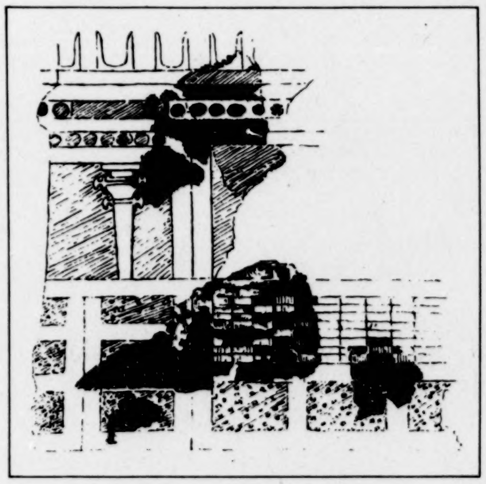


Figure 2

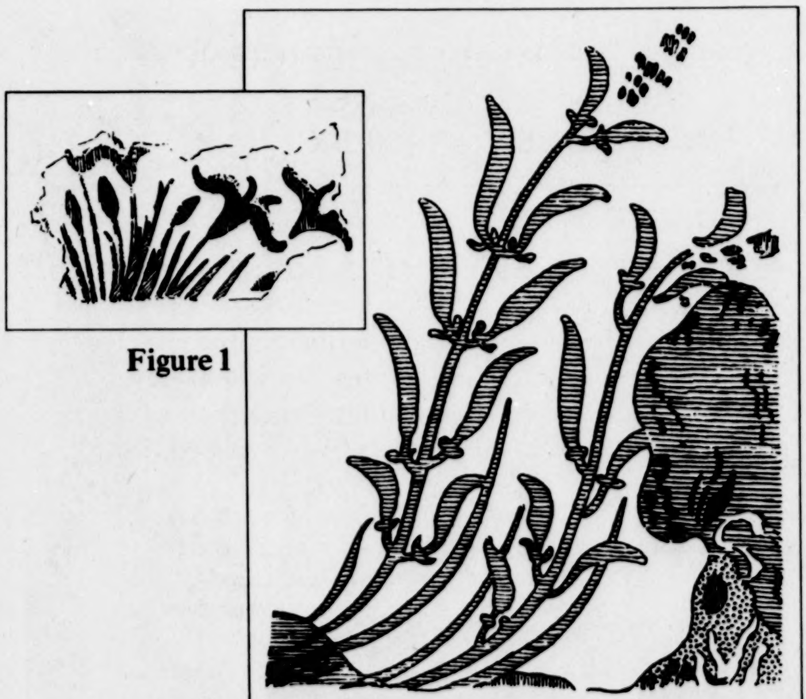
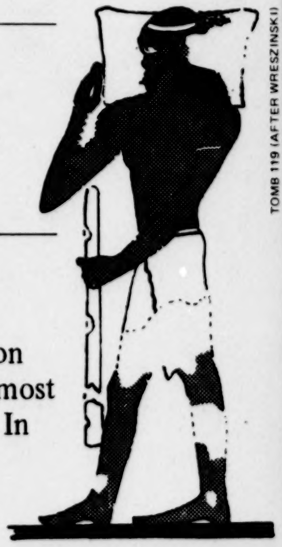


Figure 1

THE PALACE OF MINOS AT KNOSSOS BY SIR ARTHUR EVANS

FUEL SHORTAGES IN CYPRUS AND ITS EFFECT ON THE GREEK MAINLAND 12TH CENTURY B.C.

THE PROSPERITY of the Greek mainland and the rest of the Bronze Age world depended on adequate supplies of copper, most of which came from Cyprus. In **Figure 3**, an Egyptian metallurgist carries on his shoulder a Cypriote copper ingot.



TOMB 119 (AFTER WRESZINSKI)

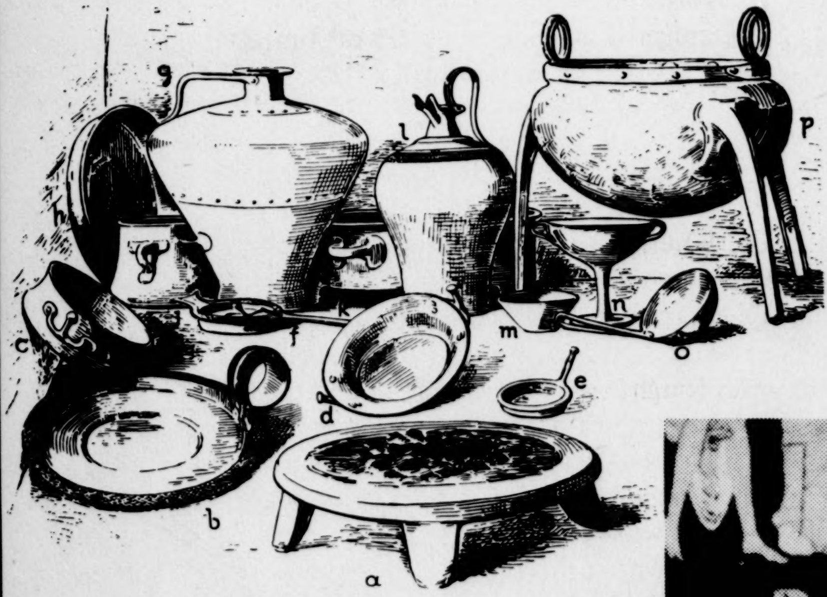
Figure 3

The smelting of copper took a heavy toll on Cyprus' forests. To refine 1.3 tons of copper ore requires 24,200 pounds of wood. Bronze Age metallurgists on the island smelted at least one million tons of ore. Therefore, about 28,000,000 trees or 344 square miles of forest were consumed

(Cyprus is only about 3600 square miles in size). Settlements, built around these copper-mining areas, made further inroads on forest areas as did the building, heating, and cooking demands of those who moved to them. When wood fuel became scarce in one mining area, ore had to be transported to regions where forests still remained.

Wood shortages throughout the island could be the reason that Cypriote copper production in the Bronze Age peaked in the thirteenth century B.C. and declined thereafter even though millions of tons of ore remained and demand for bronze (which consisted of 90 percent copper) stayed steady or possibly rose.

Finds in Cypriote foundries and a sunken ship of this period bound from Cyprus to Greece substantiate this assumption: collections of scrap bronze were found in both cases, suggesting that fuel shortages forced Cypriote metallurgists to recycle existing materials rather than smelt new ore. The decline in Cypriote copper production had profound effects on the outside world. Acute metal shortages arose on the Greek mainland. At Pylos, for example, bronze was rationed, smiths receiving as little as three pounds. Without sufficient quantities of bronze for weaponry, the Mycenaean world became vulnerable to outside attack and was eventually destroyed.



THE PALACE OF MINOS AT KNOSSOS BY SIR ARTHUR EVANS

Figure 4

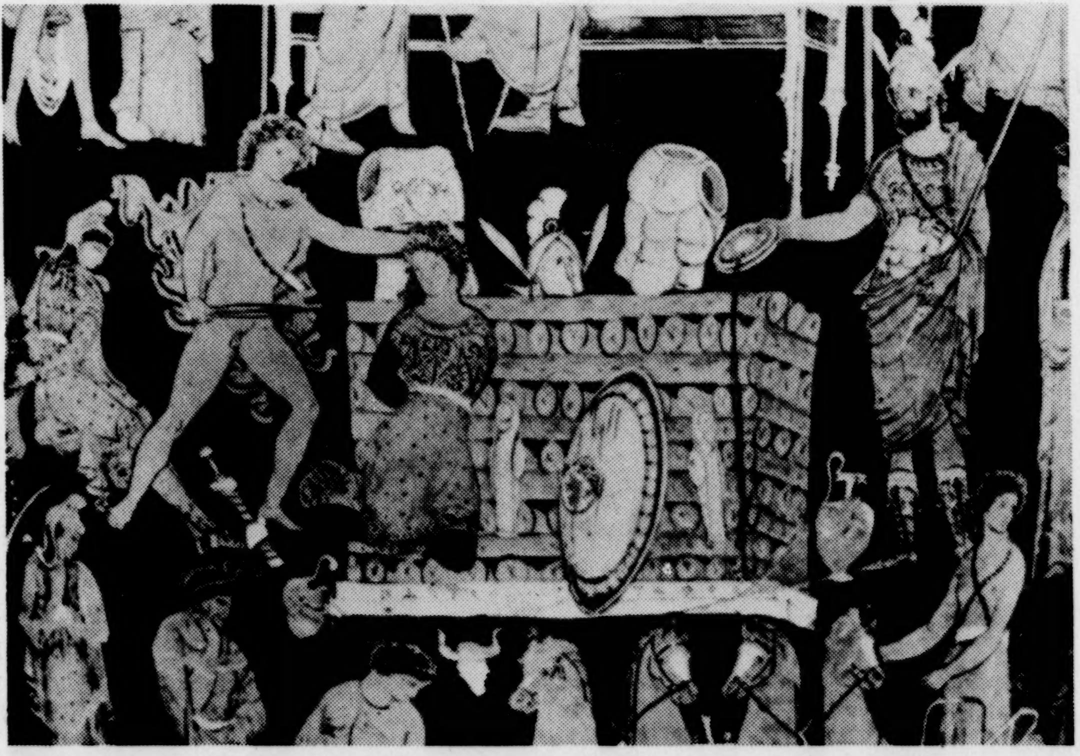
WOOD-USE DURING THE BRONZE AGE AND ITS EFFECTS

FOR THE HEROES in Homer's world, as for us today, such domestic activities as heating water, cooking, and space-heating consumed large quantities of fuel. Charcoal or wood fires provided the necessary heat in all cases. Homer tells us that Hektor's bath, for example, was prepared in a great cauldron (such as *g* or *p* in the collection of heating utensils in **Figure 4**) "set over the fire."[1] The Bronze Age people of the western Mediterranean heated their homes and cooked with tripod braziers such as *a*.

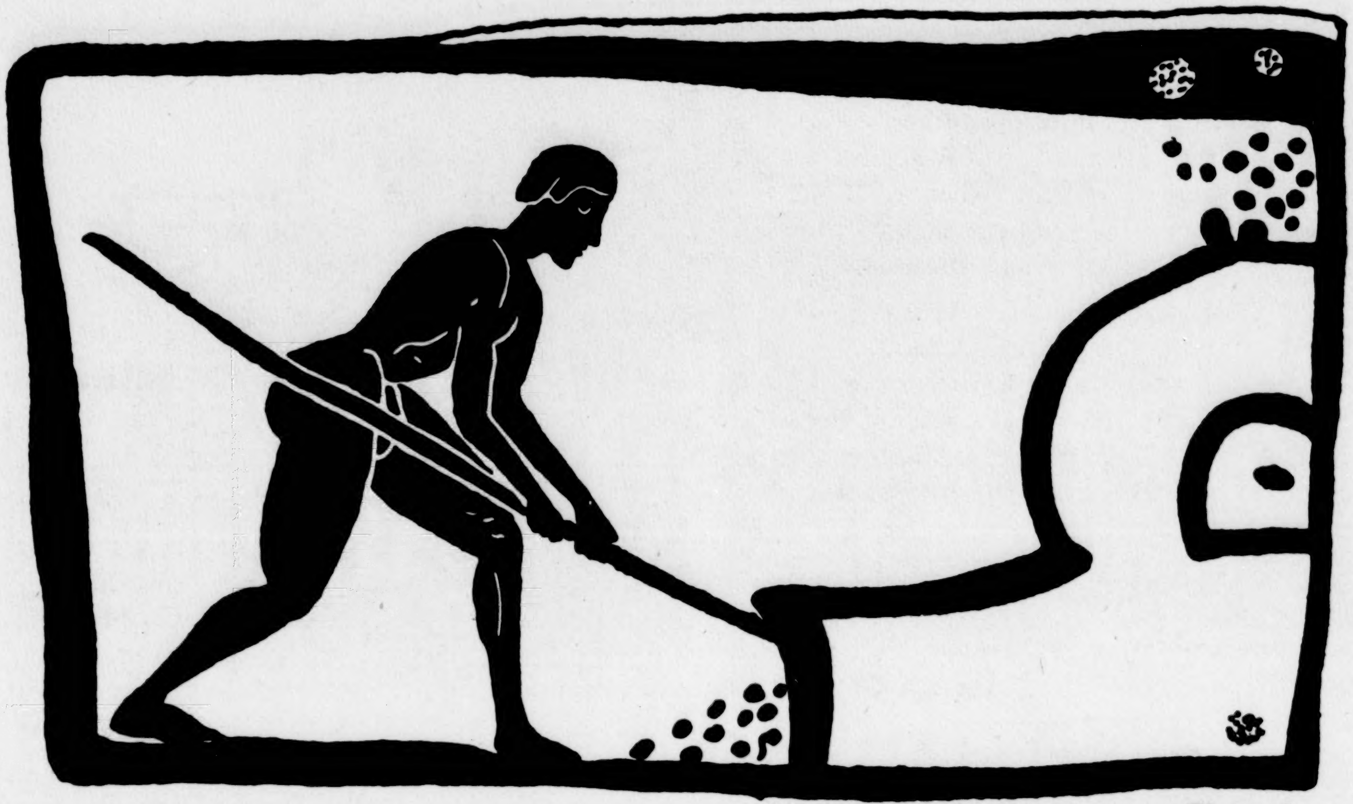
In death, too, those inhabiting Homer's world burnt great quantities of wood. Cremation, as depicted on the vase in **Figure 5**, required as much as eight cords of wood.

All the uses of wood we have discussed – material for architecture and shipbuilding, fuel for metallurgy, cooking, cremating, and heating – left Crete, Cyprus, and Mycenaean Greece bereft of much of its native timber. Without forests, lions, which Mycenaean aristocrats hunted for sport, died out, and the land, according to Aristotle, became "unproductive and completely dry."[2] Perhaps Helen was just an excuse for the resource-poor Mycenaens to lay claim over wood-rich Troy.

Figure 5



NAPLES, 300 B.C., THE CREMATION OF PATROCLUS



VASE PAINTING FROM 5TH CENTURY B.C.

Figure 6

DEFORESTATION OF ATTICA AND ITS EFFECT ON ATHENIAN LIFE

500 B.C.–300 B.C.

CERAMIC KILNS and metallurgical furnaces (like the one shown in **Figure 6**) consumed much of Attica's original forests. The great silver-smelting works at Laurion, which produced much of Athens' wealth, needed 210,000,000 mature oaks, or more than twice the amount of wood Attica could produce, to generate the 14,000,000 tons of slag found at this site.

Plato documented the destruction these works and others wrought on Attica's environment. "For some mountains which today only support bees," wrote Plato, "produced not so long ago trees, which when cut, served as roof beams for huge buildings whose roofs are still standing." Plato was also the first to analyze scientifically the ecological destruction caused by deforestation, pointing out in his lifetime (fourth century B.C.) in Attica, "You are left with something rather like the skeleton of a body wasted by disease; the rich, soft soil has all run away, leaving the land nothing but skin and bone." Furthermore, Plato observed that before loggers cut down the trees, "the soil benefited from an annual rainfall [which] was absorbed in large quantities . . . so that what was drunk down by the higher regions flowed downwards into valleys and appeared everywhere in a multitude of rivers and springs." Without trees, the rainfall in Plato's time just "wasted off the bare earth." [3]

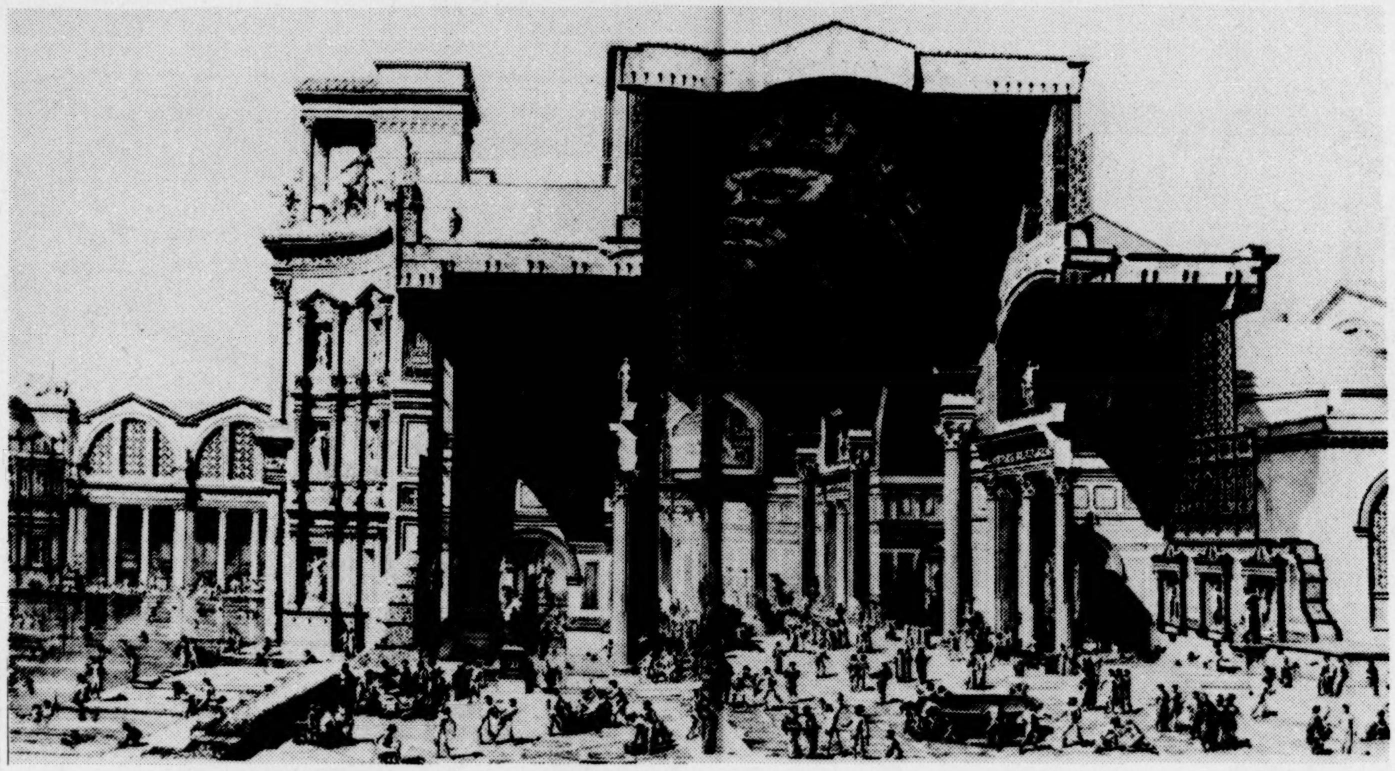
To ameliorate this ecological disaster, Plato advocated reforestation, especially near bodies of water. Such action, he believed, would create watersheds. Floods would be prevented, putting a halt to a great waste of water and its pollution by mud and other debris. Civil and sacred authorities must have concurred with Plato's environmental concern. They established areas which were off-limits to wood-cutting (sacred groves) as well as laws regulating the removal and use of wood.

Wood scarcities brought on by the indiscriminate logging of Attica came to plague the Athenians for centuries. Whether they needed wood fuel for hot showers or timber to build warships for their navy, the Athenians had to establish colonies in wood-rich areas such as Sicily or northern Greece and sometimes fought to protect their timber regions. In the end, their dependence on wood-rich Macedonia for timber supplies spelled their downfall. The Macedonians could turn the wood spigot on or off at will. In the end, Athens, as well as most of the known world, fell to Alexander, ruler of an empire built upon infinite stores of wood.

DEFORESTATION OF THE ITALIAN PENINSULA

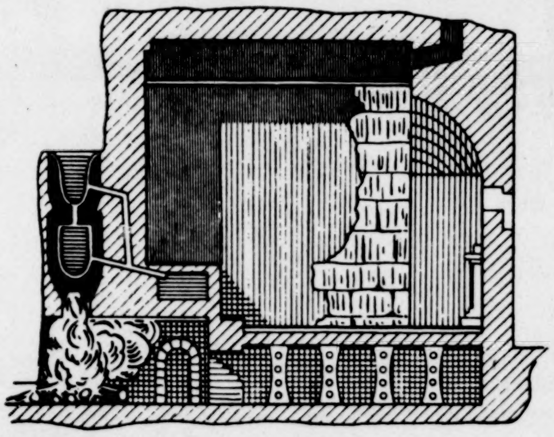
FIRST CENTURY A.D.– FOURTH CENTURY A.D.

DURING THE DAYS OF EMPIRE, Rome used much more wood than did Greece. The construction of huge villas required large quantities of wood as did their central heating systems, called hypocausts. The hypocaust, which



EDMUND PAULIN

Figure 8



HOUSE OF DIOMED, POMPEII, 1ST CENTURY A.D.

Figure 7

burned either charcoal or wood, as in **Figure 7**, circulated hot air through hollow bricks in the floors and walls. A hypocaust system could burn as much as 280 pounds of wood per hour, or more than two cords a day. Public baths, for example the Baths of Diocletian shown in **Figure 8**, evolved from mere washing establishments to block-long extravaganzas, holding as many as two thousand bathers at a time. Whole tree trunks blazed inside the baths' central furnace to heat water and air for the sauna. Wood also fueled industrial concerns such as bronze- and ironworks as well as bakeries and glassworks. The ironworks at Elba and Populonia consumed 780 square miles of forest. The military, which protected all this prosperity, required large wood outlays for its ships and other weaponry.

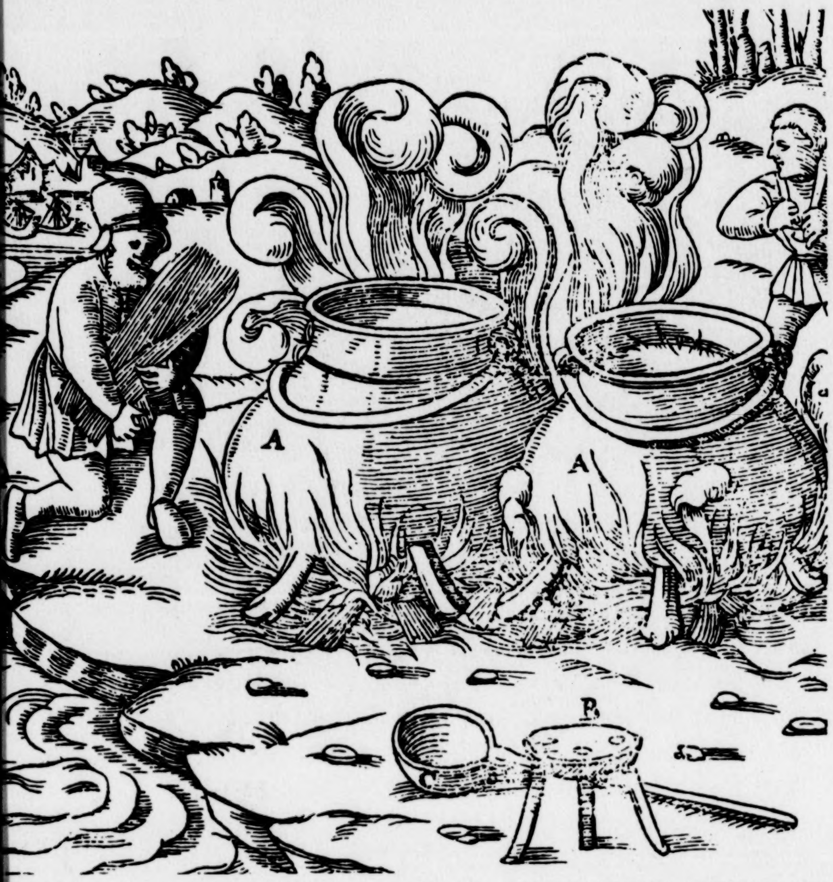
Such demands for wood had adverse effects on local forests. Latium, just south of Rome, was described around 300 B.C. as boasting "fir which grew to a very great size."[4] Logging and agriculture left this region without forests, resulting in the ruin of its land. Rain now washed the mountainsides clear of soil and pushed debris into the plains below, choking up the streams and turning lush, fecund land into uninhabitable malarial swamps. Other areas suffered as well. The geographer Strabo reports that a lack of wood for fuel forced the islanders of Elba to ship their iron to the mainland for smelting. Not long after this, the mainlanders too had to cease their smelting operations because of wood scarcities.

To satisfy their need for more wood, the Romans commissioned ships to make wood runs from France, North Africa, and Spain to Ostia, Rome's port. They also set up refining plants in foreign areas rich in wood to smelt metals for Rome's consumption. Shortages of native timber no doubt were an important reason for Rome's outward push into the primeval forests of such distant lands as Spain, Gaul, Germany and England.

THE WOOD CRISIS OF TUDOR AND STUART ENGLAND

ENGLAND'S FIRST INDUSTRIAL revolution, which began in the sixteenth century, depended largely on wood for its success. Water and windmills powered most industrial establishments of the period. They consisted entirely of wood. Water in turn powered the bellows which made the operation of the blast furnace possible. It could produce ten times more iron from ore than its more primitive predecessor. However, it consumed more fuel.

Fuel used by iron furnaces and other manufacturing concerns such as glassworks and saltworks came from the forest. Most preindustrial minds could not imagine how much wood was needed to sustain the operation of these works. They believed that it was "impossible to have any want of wood."[5] But glassmaking consumed so much wood that



BY GEORGIUS AGRICOLA IN **DE RE METALLICA**

Figure 9

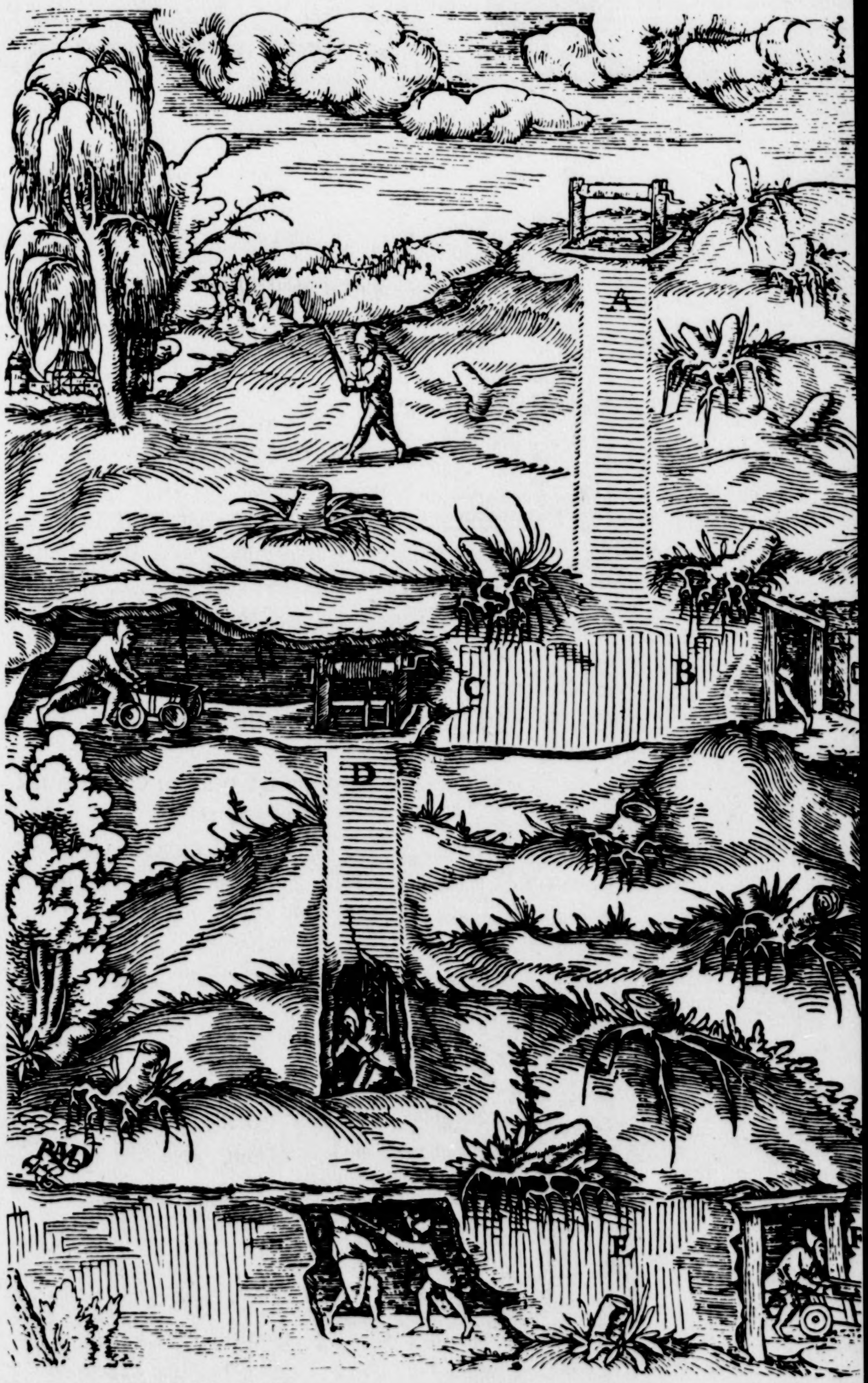
workmen could "not set up the cords half so fast as they are carried away" to the furnace.[6] Blast furnaces devoured many famous forests. Salt was produced by evaporating brine in large cauldrons placed over wood fires, as shown in **Figure 9**. Soon it became proverbial that, if industry goes up, "down goes the goodly trees."[7]

During Tudor times, iron forges and furnaces alone consumed over a thousand square miles of forest. The majority of this wood came from a narrow strip of forest near the coast or navigable rivers of southeast England where most of the industries, shipbuilders, and population had settled. Intense competition for wood arose among these various groups. Shipbuilders worried about the lack of timber for building and repairing ships. Houses were in great ruin and decay for want of timber for repairs. And people worried whether they could afford next year's heating bill as the price of wood continued to rise.

Consumer groups arose and took action. Citizens in Sussex rioted over wood prices. Those in Salisbury threw out glass workers, whom they blamed for the destruction of their woods. Others petitioned Parliament to pass laws which would preserve the forests from the onslaught of industry. These movements resulted in laws which forbade clear-cutting and felling large trees near navigable rivers to fuel ironworks.

By the seventeenth century most of the wood within 20 miles of the sea was consumed despite the laws passed to protect such woods. Industrial development continued unabated as many industrialists, especially iron masters, moved north and west where great forests still remained. Soon these forests were destroyed, too. A survey in 1662 showed that "timber trees [in the Furness area of Lancashire] are in great part wasted and destroyed."[8] In 1667 only 200 timber trees remained in the Forest of Dean, which in the previous century was regarded as "the nursery of England's navy." Such destruction also occurred in all parts westward or down the Thames toward the sea and along the coasts of Kent, Essex, Suffolk, and Norfolk. This woodcut (**Figure 10**) illustrates some of the damage done to the English forests. Notice all the stumps.

Figure 10



BY GEORGIUS AGRICOLA IN **DE RE METALLICA**

Some in the iron industry took positive steps to cope with rampant deforestation. Improvements in design of forges and furnaces cut fuel consumption by 400 percent. Other iron masters began planting tree farms or reforesting the woods they cut for charcoal.

To ease England's dependence on wood, "futurists" of the day looked to new fuels and methods of heating without fuel. Experimenters discovered how to extract oil from shale in 1697. John Evelyn, writing in the mid-seventeenth century, entertained the idea of harvesting kelp from the seas for heating fuel. The great chemist Robert Boyle suggested exploiting water power to create friction, generating heat for industry. Others experimented with solar mirrors.

Coal, however, became the alternative to wood that most people and industries adopted. However, the English paid a heavy price for this choice. By the 1660s coal smoke belching from chimneys so polluted London that the metropolis more resembled "the suburbs of hell than an assembly of rational creatures."[9]

DESTRUCTION OF THE EAST-NORTH AMERICAN FOREST 1620-1880

THE FIRST EXPLORERS found upon their arrival on the east coast of the New World forests so dense that the sun could never penetrate them. Coming from a land where most trees had been "cutte down and falne to such sicknesse and wasting consumption, as all the physick in England cannot cure,"[10] they saw America as England's timber storehouse. So did the English government. The Crown passed strict ordinances prohibiting the colonists from felling trees which someday could be used for its navy.

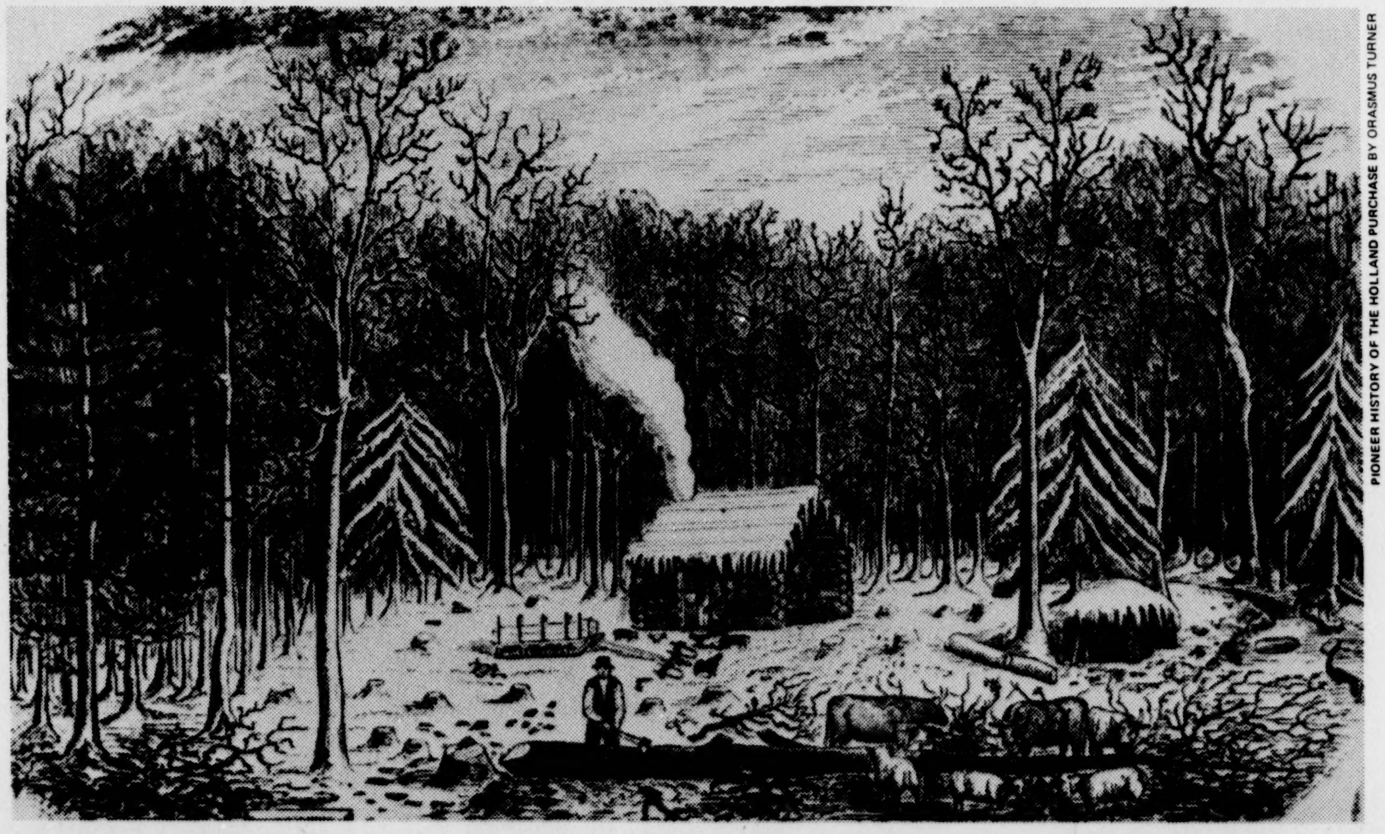
The colonists saw matters differently. Having the freedom to cut whatever trees they wanted meant prosperity. Here a poor man with 50 acres of land could sell more timber and keep himself warm with larger woodfires than could most nobles in the mother country . . . unless the Crown designated these woods for its navy. This unresolved conflict between the husbanding of the trees by the English for their own purposes and the colonists' desire to exploit timber lands however they wished was one important source of friction which eventually led to revolution.

America's timber resources made its revolution possible. Its forests supplied wood to construct its navy and to produce charcoal for iron furnaces and forges which made munitions and weapons. Washington's encampment at Valley Forge guarded the ironworks there; without them, Washington knew, America's cause would be lost.

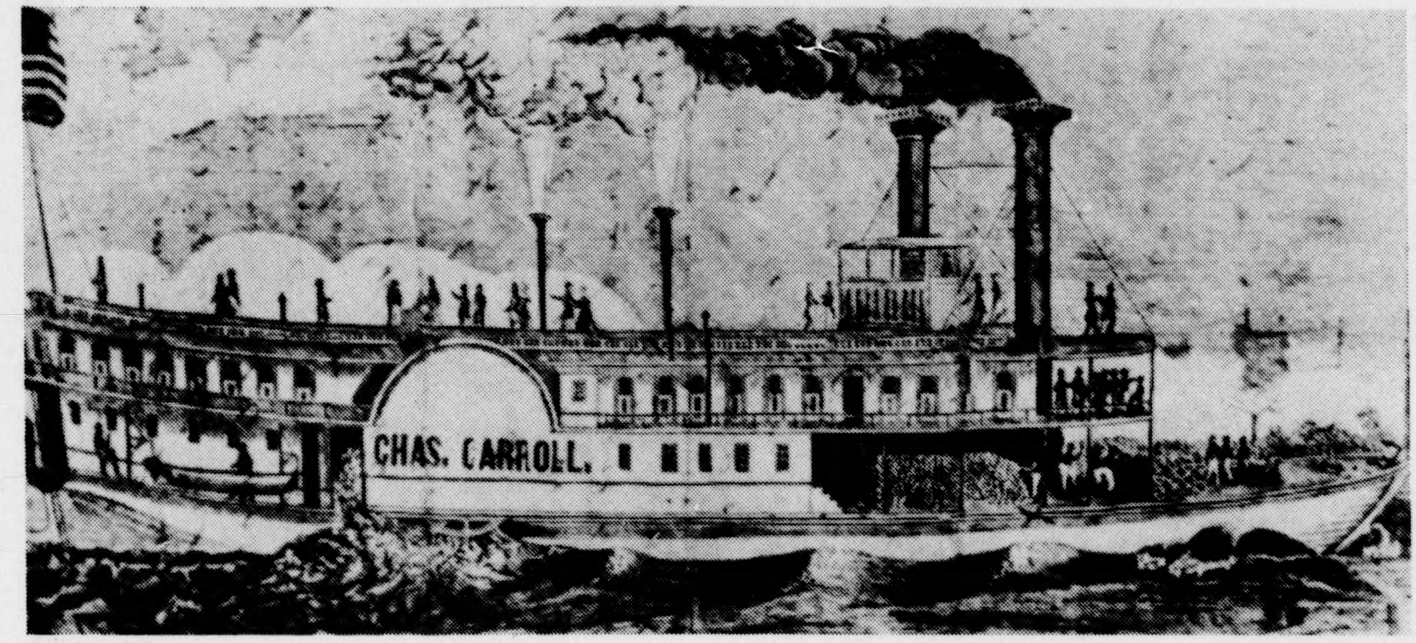
The revolution's success doomed America's forests. The typical attitude saw the forests as "cumber[ing] a rich soil and prevent[ing] its cultivation."[11] Or as de Tocqueville's companion Beaumont observed, to an American "nothing seems uglier than a forest; on the contrary, they are charmed by a field of wheat."[12] The solution, as suggested in America's 1810 census, was:

> Erect iron works, which require coal [i.e., charcoal] . . . make sugar and cabinet wares [from] maple trees . . . make furniture and gunstock [from] the walnuts and wild cherry . . . make casks, boards, shingles, and ordinary fuel [from] the oak and various trees.[13]

Figure 11



PIONEER HISTORY OF THE HOLLAND PURCHASE BY ORASMUS TURNER


CHAS. CARROLL.

HISTORICAL AND PHILOSOPHICAL SOCIETY OF OHIO

Figure 12

Several decades later, railroads and steamboats joined this list of effective forest clearers. (Notice the logs directly below the steamboat's smokestacks in **Figure 12**.) Statistics illustrate the success of America's war against the forests: Between 1810 and 1890, ironworks consumed more than 9000 square miles of forest; steamboats burned over 10,000 square miles in 50 years; it took 30,000 square miles of forest to fuel locomotives from 1830-1880; another 5000 square miles of trees were cut in 1880 alone for domestic heating and cooking. One author estimated America's annual deforestation rate at 7000 square miles in 1855, growing to 8400 square miles in 1876. According to the 1880 census (contrast the tone to the aforementioned census of 1810):

> The great pine forest of the north has already suffered fatal inroads. The pine which once covered New England and New York has already disappeared. Pennsylvania is nearly stripped of her pine, which once appeared inexhaustible.[14]

Another alarming report stated that

> "the states of Ohio and Indiana, and the southern parts of Kentucky and Michigan, so recently a part of the great East-American forest, have even now a greater percentage of treeless area than Austria and the North-German Empire, which have been settled and cultivated for upward of a thousand years."[15]

PIONEER HISTORY OF THE HOLLAND PURCHASE BY ORASMUS TURNER

Figure 13

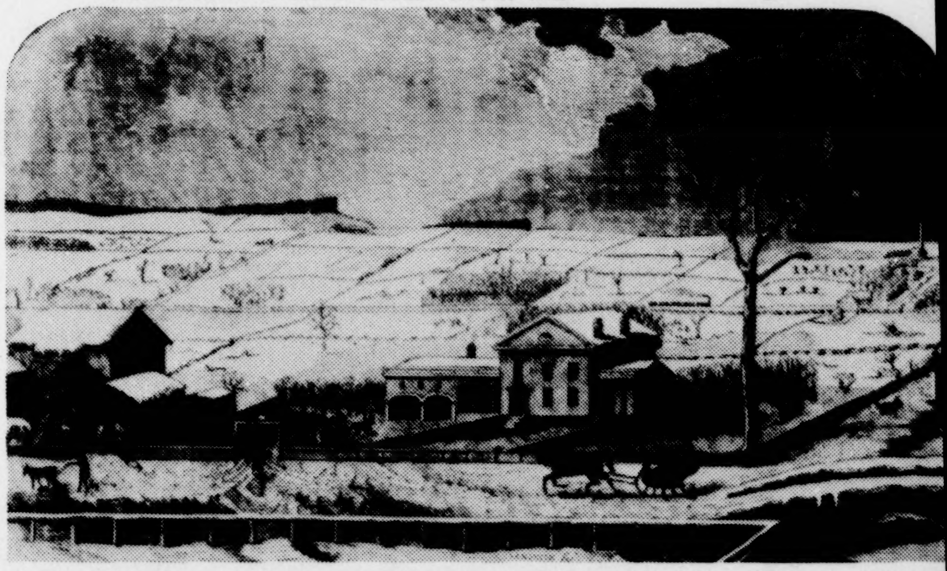


Figure 13 shows the same, albeit formerly wooded, area (in New York State) as in the earlier log cabin illustration (**Figure 11**). By the end of the 1870s it became clear to more thoughtful Americans that the deforestation of eastern America was just another chapter of humanity's piecemeal destruction of the planet. As one writer succinctly stated in 1876:

> We are doing what man has done in so many parts of the world, converting what should be the homes of future generations into desert. This we have no right to do.[16] ■

FOOTNOTES

1. **Iliad**, by Homer; p. 443ff.

2. **Meteorologica**, by Aristotle; vol. I, chap. xiv.

3. **Critias**, by Plato; iii.

4. **On Plants**, by Theophrastus; vol. V, chap. viii, p. 1-2.

5. **Stowe's Annals**, p. 1025.

6. "Glassmaking at Knowle, Kent," by T. Lennard Barrett, in **The Antiquary**; 1905; vol. 41, p. 127-129.

7. **An Essay on the Causes of the Decline in Trade**, by M. Decker.

8. **The Early Iron Industry of Furness**, by A. Fell; p. 119.

9. **Fumifugium**, by John Evelyn; p. 19.

10. **Nova Brittania**, by Robert Johnson; p. 16.

11. **A Statement of the Arts and Manufactures of the United States, 1810**, by Trench Cox; p. 58.

12. Quoted in **Tocqueville and Beaumont in America**, by George W. Pierson; p. 190.

13. Trench Cox, *ibid*.

14. "Report on the Forests of North America," by Charles C. Sargent, in **Tenth Census of the U.S., 1880**; vol. 9, p. 480.

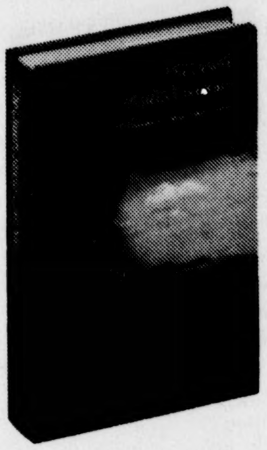
15. "The Climactic Influence of Vegetation," by F.L. Oswald, in **Popular Science Monthly**; 1876; vol. 11, p. 388.

16. "Spare the Trees," in **Appleton's Journal**; 1876; voi. 1 (new series), p. 472.

The Desert Smells Like Rain

Gary Nabhan tells how the Papago Indians lived with the desert, farming when it rained, collecting wild plants, spinning myths of animals, and breeding a diversity of dry-climate plants that let them live more healthfully than many of their descendants do now. As you can read in the author's "The Humpbacked Flute Player" (p. 4 of this issue), many foodplant varieties were only kept alive because desert Indians wanted to keep their farming methods intact. Here Gary takes the story further than his article, with more detail about how the Indians live now, and along the way shows that the desert — wet or dry — is a place where people can thrive if they seek stewardship, not conquest. *—Art Kleiner*

The Desert Smells Like Rain
(A Naturalist in
Papago Indian Country)
Gary Paul Nabhan
1982; 156 pp.
$12.50 postpaid from:
North Point Press
850 Talbot Avenue
Albany, CA 94706
or Whole Earth
Bookstore



●

My first lesson about Coyote's plants left a bad taste in my mouth, to say the least. I had brought some wild desert gourds out to a village with me, curious to find if the Papago used them in any way. An elderly woman looked at the little gourds in the bed of my pickup.

"What you got there? Oh, that's what they call *a:d!* Long time ago they used to go out, and when those fruit got ripe and turned yellow, they would eat it just like a sweet apple."

Before she had a chance to finish her story, I grabbed one tender, yellow gourd and took a bite into it. She yelled "DON'T" but it was too late — that taste was so terrifically bitter that my tongue muscles went into shock. I spat the pulp out and ran for water.

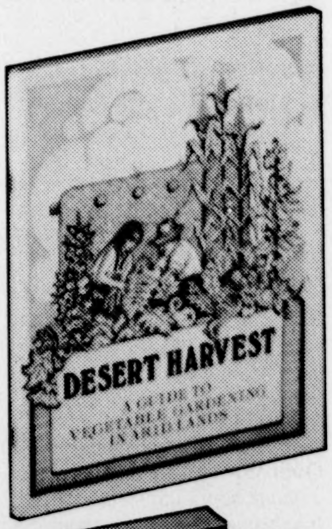
When I returned to where the woman was, she was grinning.

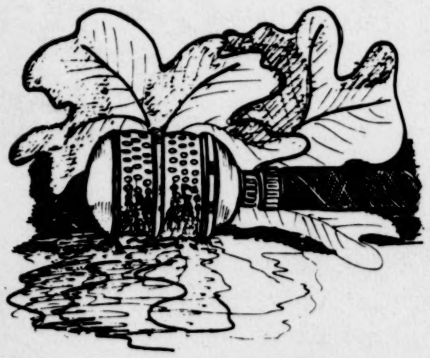
"It *used* to taste just like an apple, they say. Then Coyote came along and he *shit* on it. I guess ever since then it has had that taste that is in your mouth right now. . . ."

Desert Harvest

This beginner's organic-gardening book comes from southern Arizona. Desert techniques include shading tomatoes so the summer heat won't burn up the pollen and prevent fruit set, and deep irrigation. Mild winters make gardening a two-season operation, and vegetable varieties for both cool and warm seasons are listed. *—Richard Nilsen*

Desert Harvest
(A Guide to
Vegetable Gardening
in Arid Lands)
Jane Nyhuis
1982; 63 pp.
$7 postpaid from:
Meals for Millions
P.O. Box 42622
Tucson, AZ 85733





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Deep watering is best accomplished by flood irrigation. This means simply laying a hose on each bed for about 15 minutes. The basin or lipped rim will keep the water from overflowing onto pathways. Use of a bubbler (shown here) will reduce rutting due to a forceful stream or water. Deep watering also keeps salts moving through the soil. When salts accumulate, they can have an adverse effect on plants, eventually reducing yields and even killing the plant.

Pig Earth

Last summer in France I wondered about the peasants I saw turning hay by hand but I had neither enough words to ask nor the courage to wander into the grammatical morass of conditional and future imperfect.

I found **Pig Earth** *when I got home. John Berger addressed my questions through the back door of storytelling. His stories are so vivid that long after you've forgotten that the 22-million-strong French peasantry of 1789 had dwindled to only 8 million 100 years later you remember the stories. They make you mourn the passing of this stubborn class that disappears as soon as it begins to play by the rules of the market economy and dies out if it doesn't.*

Pig Earth *is the first of a trilogy,* **Into Their Labours.** *Close to finishing it you read more slowly, wanting it to last, and are glad and relieved that John Berger is writing more. It's that good.* *—Sherry Frazer*

Pig Earth
John Berger
1979; 213 pp.
$6.95 postpaid from:
Pantheon Books
400 Hahn Road
Westminster, MD 21157
or Whole Earth
Bookstore

PIG EARTH
JOHN BERGER

●

In July the heifer Marquise mounted on (the old man) Marcel's back, as if he were a cow and she the bull. Marquise was not yet fully grown. Her teats were no larger than the fingers of a woman's glove. Marcel fell forward onto his knees. For a week his left leg hurt and, after putting it off several times, he decided to go and see the bone-setter.

It was market day and the bus was crowded. Marcel calculated that it was eight years since he had taken the bus. After half an hour, he could no longer name a single farm or hamlet which they passed.

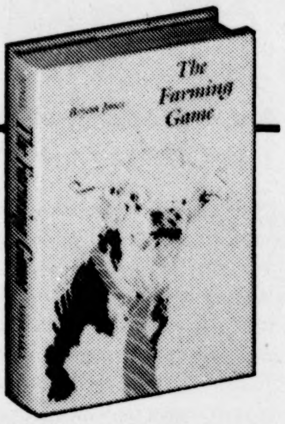
The bone-setter grasped the old man's knee in his cool hands. The very white leg had no fat on it at all. The bone-setter rotated the knee and applied some ointment. Marcel paid the fee of three thousand francs and added a pot of honey. The bone-setter protested at the honey.

The honey is from our own bees, said Marcel.

The bus back was not until the afternoon, and so he wandered through the market. The tomatos on the stalls were more advanced than Nicole's. Leaving the fruit and vegetables behind, he strolled between hanging carpets which were for sale. The sight of them and their thick pile made him thirsty. In a cafe he drank two glasses of cold white

The Farming Game

Farms and farmers have been disappearing in large numbers in America since the 1950s. **The Farming Game** *explains the arithmetic that has greased this economic slide, and also suggests strategies for people interested in surviving this trend and farming in the 1980s. Bryan Jones has a style reminiscent of Will Rogers — an ear for ironic humor, political savvy, and a simmering contempt for bureaucratic institutions (big banks, government, universities). His lectures on profit and advice on diversification are the perfect antidote for romantic agrarian notions. This is a book that any beginner will need and anyone with experience will nod at knowingly. —Richard Nilsen*



The Farming Game
Bryan Jones
1982; 221 pp.
$15.95 postpaid from:
University of Nebraska Press
901 North 17th Street
Lincoln, NE 68588
or Whole Earth
Bookstore

●

The truth is that farmers occupy the most privileged class in America. They enjoy the greatest opportunity for real wealth and the nearest thing to personal freedom that exists in this country.

●

Nobody hates a stable market more than a commodity broker with a mortgage. If you want to see a smile on his face, let pork bellies go straight up, with shorts scrambling to cover and anxious buyers ringing his phone off the hook. Or let broilers plunge to life-of-the-contract lows, with sellers unloading their heavy artillery and longs digging foxholes. Erratic markets multiply commissions, buy new Porsches, and make alimony a whole lot easier. Have soybeans tick by at 6.74¼, 6.74½, 6.74¼, and the brokers may start a telephone chess game just to look busy. To avoid stagnation it is necessary to develop stories.

●

My prejudices, freely admitted, favor the small-town (less than 800 population) banker who has loaned up to between 60 and 85 percent of his deposits (this shows that he works at his profession) and who has some real knowledge of agriculture. I do not like chain banks, banks owned by multibank holding companies, or branch banks. These folks are more likely to be interested in short-term profits and in empire building than in the long-term interests of their communities. The holding-company board of directors may decide tomorrow that turkey ranches are good and that milk cows are bad. Maybe some smart boy just gave a lecture on declining milk prices at a convention. Overnight the dairy farmers will start having farm sales, and turkey flocks will proliferate like gerbils. Or, as has happened on more than one occasion, a city bank with several rural subsidiaries will decide all farm lending is a bad risk this year and will put all their eggs into the condominium market uptown. Farmers out in the boonies, faced with lots full of half-finished cattle and no credit to buy feed, will start dumping assets, depressing the market, and fulfilling the smart-boy prophesy. . . .

In contrast, the competent country bank operator lives in one town all his life. His customers are his friends and he likes to see people prosper. If he is a prudent businessman, profits will be adequate and he can indulge in charitable lending from time to time for the greater community good. He is seldom thanked for such behavior. Folks are too envious of his position. However, secure in the knowledge of a job well done, a banker can ignore such slights. If you can find a good country bank similar to what I have described, marry it on the spot. You may never get another opportunity.

●

"Hell, Ed, who ya tryin' to kid? You'd be the first dumb bastard plantin' corn if it was worth ten cents a bushel. Ya got the habit bad as anyone I know. The few birds you ain't killed yet start chirpin' in the spring, an' you'll wax that tractor a coupla times, fire 'er up, an' go plant corn. It ain't yer fault. It's just like heroin, or overeatin', or any other kind of bad habit, is what it is."

---

wine. When he came out, he saw a circle of people, mostly women, looking at somebody he couldn't see. The ones at the back were standing on tiptoe. From the centre of the circle he heard a man's voice, like a voice on the radio when the volume is turned up. Idly Marcel looked from woman to woman to decide which one pleased him most. She had wide hips and was wearing a dress with flowers like peonies printed on it, and was holding the hand of a small child. The voice of the invisible speaker continued:

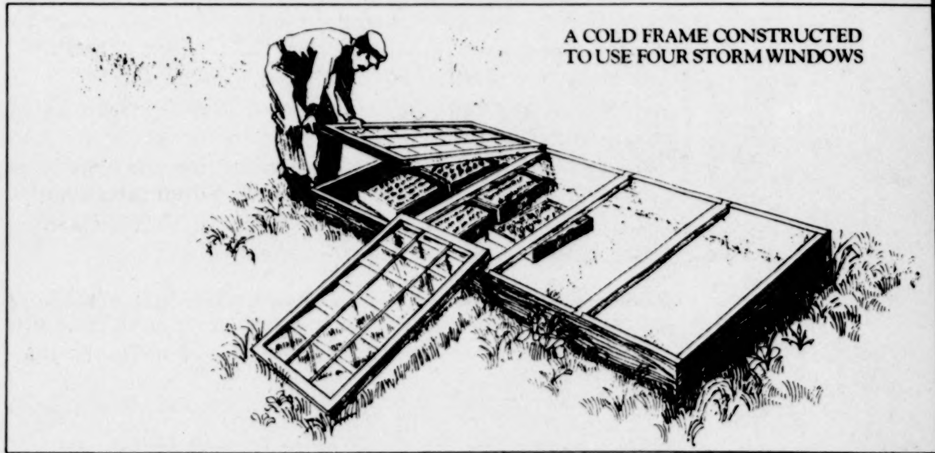
Ladies, do I look like a crook? Did I hear one of you say Yes! Ah well! I know women are suspicious. And if I had to deal with men, like you do, I'd be suspicious!

Suddenly Marcel recognized the voice. The man in the centre of the circle was his own son.

●

Agriculture does not necessarily require peasants. The British peasantry was destroyed (except in certain areas of Ireland and Scotland) well over a century ago. In the USA there have been no peasants in modern history because the rate of economic development based on monetary exchange was too rapid and too total. In France 150,000 peasants now leave the land every year. The economic planners of the EEC envisage the systematic elimination of the peasant by the end of the century, if not before. . . . An intact peasantry was the only class with an in-built resistance to consumerism. When a peasantry is dispersed, markets are enlarged.

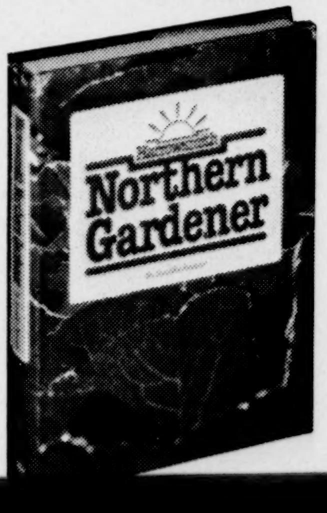
The Harrowsmith Northern Gardener



A COLD FRAME CONSTRUCTED
TO USE FOUR STORM WINDOWS

The northern third of the United States clear up to the land of permafrost is the subject area of this book. The author is garden editor of the Canadian journal **Harrowsmith** *(***NWEC** *p. 178). She takes you from the seed catalogs through to the pressure canner with organic advice for short-season gardens. There is also specific information for Canada's amazingly diverse climatic regions. This is a nicely made book with luscious color photography. —Richard Nilsen*

The Harrowsmith
Northern Gardener
Jennifer Bennett, Editor
1982; 210 pp.
$20.95 postpaid from:
Firefly Books
3520 Pharmacy Avenue
Unit 1-C
Scarborough, Ontario
M1W 2T8
Canada
or Whole Earth
Bookstore



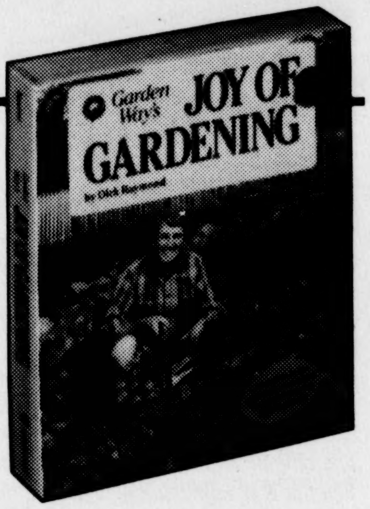
Garden Way's Joy of Gardening

When I first thumbed thru this fat, glossy paperback it looked a little strange, or at least unorthodox. The traditional garden-book format of dense pages and crowded layout was missing, all the illustrations were in color, there was white space to relieve the eye, and it was so slick I wondered if maybe it was a sales brochure for Toyotas and the cabbages were just there for background. Not to mention the huge, dramatic headings that introduced sections, like **MY 12-POINT SYSTEM FOR FEWER AND FEWER WEEDS EACH YEAR** *or* **CELERY — HOW I GROW THIS CHALLENGING VEGETABLE.**

Was it a garden book or another self-improvement plan?

I settled down for a more serious look and before long I was getting hooked on all kinds of stuff, like composting with alfalfa meal, "tunnel growing" — wire reinforced plastic formed into tunnels to make instant hot houses — and Raymond's weed theory, which states that weed seeds sprout only in the top quarter-inch of soil, so shallow cultivating zaps them but deep tilling just churns more up to the surface. Along the way I found a thorough grounding in garden basics with well-illustrated details on growing just about any veggie you've got desires for, from the traditionals like corn and tomatoes to the experiments that the seed catalogs induce in all of us, experiments that generally flop. There's basic truths along with new insights and tips, and bygawd if he can grow peanuts and okra in Vermont then I'm going to try them again. So what if it looks like a Toyota sales brochure? Raymond has been working the soil for 40 years and his natural wisdoms are nice to have.

—Dick Fugett



Garden Way's
Joy of Gardening
Dick Raymond
1983; 367 pp.
$19.95 postpaid from:
Garden Way
Publishing Company
Charlotte, VT 05545
or Whole Earth
Bookstore

●

I've found *alfalfa meal* to be about the cheapest, quick-est-acting activator for a compost pile. If you can't find any at your garden or feed store, look in the supermarket for "Litter Green," a kitty litter product that's 100 percent alfalfa meal.

Every time I add new material to the compost pile, I dust it thoroughly with alfalfa meal and moisten the pile a little. Alfalfa meal is an excellent source of nitrogen and protein. It is made from alfalfa hay and is usually 14 to 16 percent protein.

This is how Rhubarb chard looks after cutting it close to the soil. In a few days it will produce new top growth.

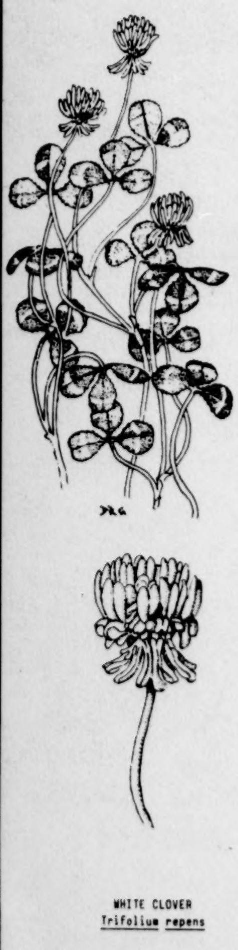
Feed the Soil

Kafka began his famous **Metamorphosis** *with the protagonist Gregor Samsa, a distraught European, waking up to discover he'd been transformed into an insect.* **Feed the Soil** *begins with Hylas Hare, an unemployed rabbit, awakening on a train to find a beautiful lady rabbit sitting across from him. Kafka's efforts will live longer in literary history, but on the other hand there're folks like me who think that growing a good green manure crop beats hell out of some European's existential gloom, and we'll more likely have McLeod on our bookshelf.*

Hylas Hare is soon revealed as naught but a literary device to introduce us to Ralph Waldo Earthworm, and thus by the time we've reached chapter three we're well into the basics of soil science. From there on both Hylas and Ralph fade away as the book gets heavy and we're given a solid introduction to underground principles.

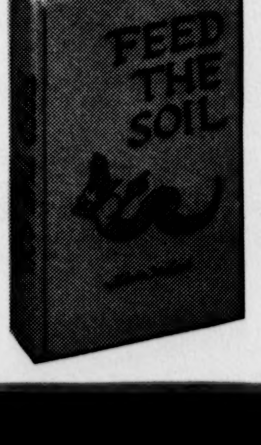
Don't let the rabbit prelude distract you: this is a thoroughly practical volume. The emphasis is on green manure crops, especially nitrogen fixers, and it's the best reference I've seen. Several hundred crops are listed, and for each there is info on habit, uses, range, soil, and seeding. Whether you're wondering what to do with that idle 5x20 plot in the garden or gazing out at the south 40 and searching for an alternative to the escalating cost of chemical fertilizer, this book will be eminently useful.

—Dick Fugett



WHITE CLOVER
Trifolium repens

Feed the Soil
Edwin McLeod
1982; 209 pp.
$14.95 postpaid from:
Organic Agriculture
Research Institute
P.O. Box 475
Graton, CA 95444



●

I really shouldn't say that legumes fix nitrogen from the air because they don't actually. Legumes have a partnership, a symbiotic relationship with a nitrogen-fixing bacteria, *Rhizobium*. Legumes and Rhizobium bacteria mutually benefit each other. The bacteria live in root nodules of legumes. The Rhizobium take nitrogen from the air, fix it in their bodies and, when they die, the nitrogen becomes available for the legumes to use for their growth. In exchange for the nitrogen, the legumes give sugars to the bacteria to eat while they are alive in the nodules.

Compared to the number of plant species on earth, there are few that have this nitrogen fixing symbiosis. Most plants just can't get nitrogen from the air. They have to wait until an adequate quantity of nitrogen builds up in the soil for them to grow. Some plants require less nitrogen than others. Fortunately, due to the legumes' partnership with Rhizobium bacteria, they can obtain nitrogen from the air.

●

Trifolium repens WHITE CLOVER
Habit: A hardy, self-propogating, long lived, perennial legume. White Clover has creeping stems which root at the nodes. Its fibrous root system helps it withstand drought. This Clover spreads rapidly once it is established.

Uses: Erosion control, green manure, cover crop and pasture. White Clover is not used for hay because it is too short and shrinks too much in drying. It is honeybee pollinated and a good bee plant. For pastures, White Clover grows well with Kentucky Bluegrass, just as Red Clover grows well with Timothy. However, it is important to note that cattle avoid the flowers and when in seed it sometimes causes horses to salivate.

HP Books

Trying to keep a young orange tree alive during a string of 20-degree nights and serious bug attacks had me looking for help, and when I asked my main nurseryman what to do, he reached back into the compact library behind the counter and pulled out his central citrus authority. It looked to me like another of the ORTHO series so I was anticipating a once-over-lightly approach, but instead there was a complete and thorough reference. The book was put out by HP Publishing in Arizona and was a most readable and informative volume, and led to my discovery of the wide range of their other gardening books.

The ORTHO similarity is genetic, for both operations were directly influenced by the Sunset garden book series that began in the 50s. But HP tried harder and surpassed the competition. Their books have more pages, more information, more color photos, and a middle-of-the-road approach to the chemical vs. organic philosophy. They're more current too; in their **Western Fruit, Berries and Nuts** *(an Eastern version comes off the presses soon), I found varieties that have only just appeared in the nursery catalogs. HP offers more than a dozen garden books with titles ranging from* **Vegetables, Herbs,** *and* **Gardening in Small Places** *to* **Pruning** *and* **Lawns.** *To make matters easier they also have a toll free phone number for ordering: (800) 528-4923.* —*Dick Fugett*

Citrus
(How to Select, Grow and Enjoy)
Richard Ray and Lance Walheim
1980; 176 pp.

Western Fruit, Berries and Nuts
(How to Select, Grow and Enjoy)
Lance Walheim and Robert L. Stebbins
1981; 192 pp.

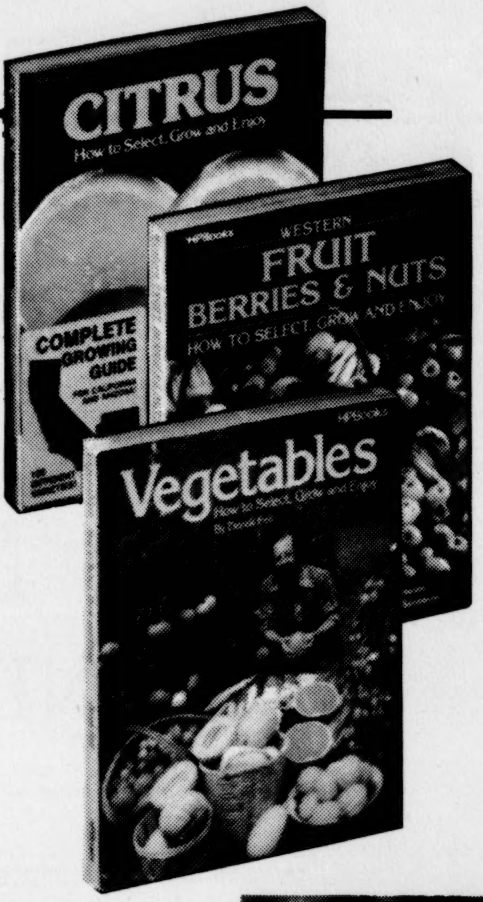
Vegetables
(How to Select, Grow and Enjoy)
Derek Fell
1982; 192 pp.

$8.95 each postpaid

HP Booklist

free

all from:
Horticultural Publishing Company
P.O. Box 5367
Tucson, AZ 85703
or (books only)
Whole Earth Bookstore


CITRUS
How to Select, Grow and Enjoy
COMPLETE GROWING GUIDE
HPBooks
WESTERN
FRUIT
BERRIES & NUTS
HOW TO SELECT, GROW AND ENJOY
HPBooks
Vegetables
How to Select, Grow and Enjoy

TREE FRUIT COMPATIBILITY

	SCION									
STOCK	ALMOND	APPLE	APRICOT	CHERRY, SOUR	CHERRY, SWEET	PEACH	PEAR	PLUM, EUROPEAN	PLUM, JAPANESE	QUINCE
ALMOND	X					X				
APPLE		X								
APRICOT			X			•		X	X	
CHERRY, SOUR				X	X					
CHERRY, SWEET				X	X					
PEACH	X		X			X		X	X	
PEAR							X			
PLUM, EUROPEAN	X		X			•		X	X	
PLUM, JAPANESE			X			•		•	X	
QUINCE							•			X

Trees bearing multiple types of fruit can be created by grafting or budding wood from one fruit type, or the scion, on to a tree, or the stock, of another fruit type. The chart above indicates compatibility between fruit types. This symbol * indicates that the combination is possible but may be short-lived or weak.
—Western Fruit, Berries and Nuts

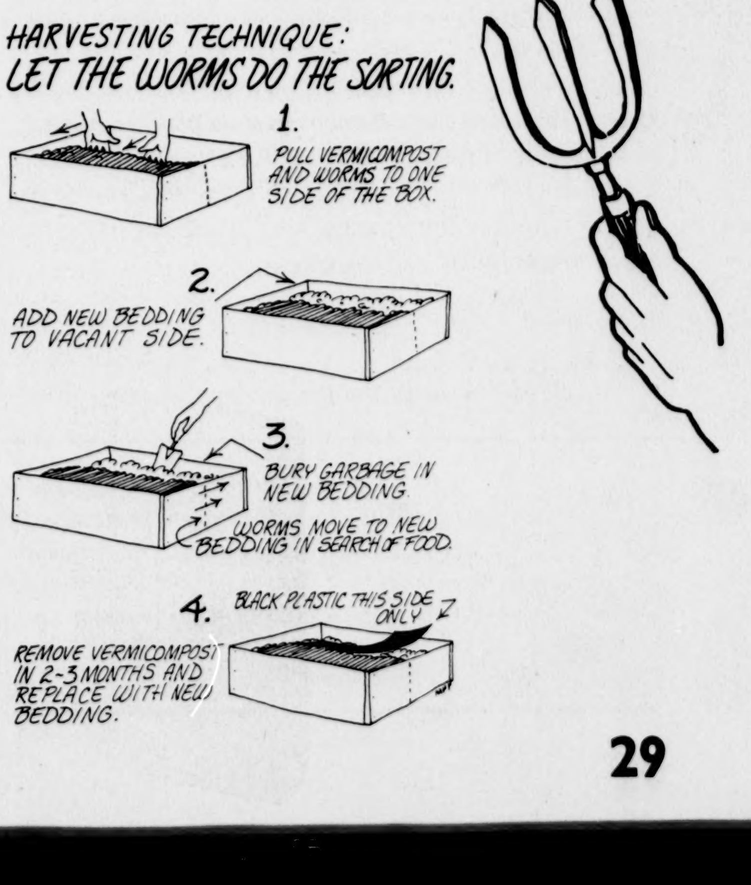
BLOSSOM END ROT. **A nonparasitic disease that usually occurs because of irregular or inadequate watering. Such watering causes the trace element calcium to be deficient. Tips of fruit such as tomatoes and peppers turn black.**
CONTROL. **Water transplants regularly until they are established. Use a mulch to conserve moisture. Mix lime or wood ashes into soil to provide plants with adequate amounts of calcium.** —Vegetables

Worms Eat My Garbage

How to keep worms in a box to transform your kitchen organic garbage into humus. The name for this is vermicomposting and one big advantage over regular composting is that you can do it all in a box in your house — without odors. If you live where the ground freezes in winter this method will eliminate those trips outside to kick snow off a stiff tarp covering a heap of frozen garbage that won't become compost until the spring thaw. —*Richard Nilsen*

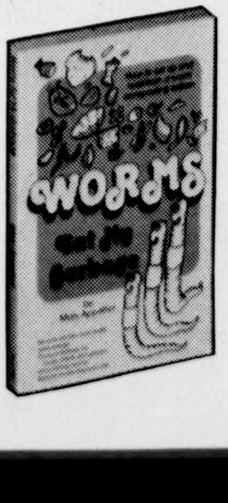
●

Burial of garbage, whether it is done weekly or more often, consists merely of pushing bedding aside to create a large enough pocket to contain the garbage, depositing the garbage, and covering it with an inch or so of bedding. Train yourself to make a few observations at these times. Does the bedding seem to be drying around the edges? Where are the worms congregating? To find out, you will have to push bedding aside in areas where you have deposited garbage. You can use your hands to do this, or you may prefer to use a trowel or a small hand tool similar to what I call my "worm fork." The worm fork is less likely to injure worms than a trowel.


HARVESTING TECHNIQUE:
LET THE WORMS DO THE SORTING.
1.
PULL VERMICOMPOST AND WORMS TO ONE SIDE OF THE BOX.
2.
ADD NEW BEDDING TO VACANT SIDE.
3.
BURY GARBAGE IN NEW BEDDING.
WORMS MOVE TO NEW BEDDING IN SEARCH OF FOOD.
4.
BLACK PLASTIC THIS SIDE ONLY
REMOVE VERMICOMPOST IN 2-3 MONTHS AND REPLACE WITH NEW BEDDING.

Worms Eat My Garbage
Mary Appelhof
1982; 102 pp.

$6.95 postpaid from:
Flower Press
10332 Shaver Road
Kalamazoo, MI 49002


WORMS
Eat My Garbage

JOURNAL OF THE ASSOCIATION OF THEROLINGUISTICS

THE AUTHOR OF THE ACACIA SEEDS: MANUSCRIPT FOUND IN AN ANT HILL

Edited by G. West, President

THE MESSAGES were found written in touch-gland exudation on degerminated acacia seeds laid in rows at the end of a narrow, erratic tunnel leading off from one of the deeper levels of the colony. It was the orderly arrangement of the seeds that first drew the investigator's attention.

The messages are fragmentary, and the translation approximate and highly interpretative; but the text seems worthy of interest if only for its striking lack of resemblance to any other Ant texts known to us.

Seeds 1-13

> [I will] not touch feelers. [I will] not stroke. [I will] spend on dry seeds [my] soul's sweetness. It may be found when [I am] dead. Touch this dry wood! [I] call! [I am] here!

Alternatively, this passage may be read:

> [Do] not touch feelers. [Do] not stroke. Spend on dry seeds [your] soul's sweetness. [Others] may find it when [you are] dead. Touch this dry wood! Call: [I am] here!

No known dialect of Ant employs any verbal person except the third person singular and plural and the first person plural. In this text, only the root forms of the verbs are used; so there is no way to decide whether the passage was intended to be an autobiography or a manifesto.

Seeds 14-22

> Long are the tunnels. Longer is the untunneled. No tunnel reaches the end of the untunneled. The untunneled goes on farther than we can go in ten days [*i.e.*, forever]. Praise!

The mark translated "Praise!" is half of the customary salutation "Praise the Queen!" or "Long live the Queen!" or "Huzza for the Queen!" – but the word/mark signifying "Queen" has been omitted.

Seeds 23-29

> As the ant among foreign-enemy ants is killed, so the ant without ants dies, but being without ants is as sweet as honeydew.

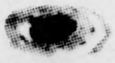
An ant intruding in a colony not its own is usually killed. Isolated from other ants, it invariably dies within a day or so. The difficulty in this passage is the word/mark "without ants," which we take to mean "alone" – a concept for which no word/mark exists in Ant.

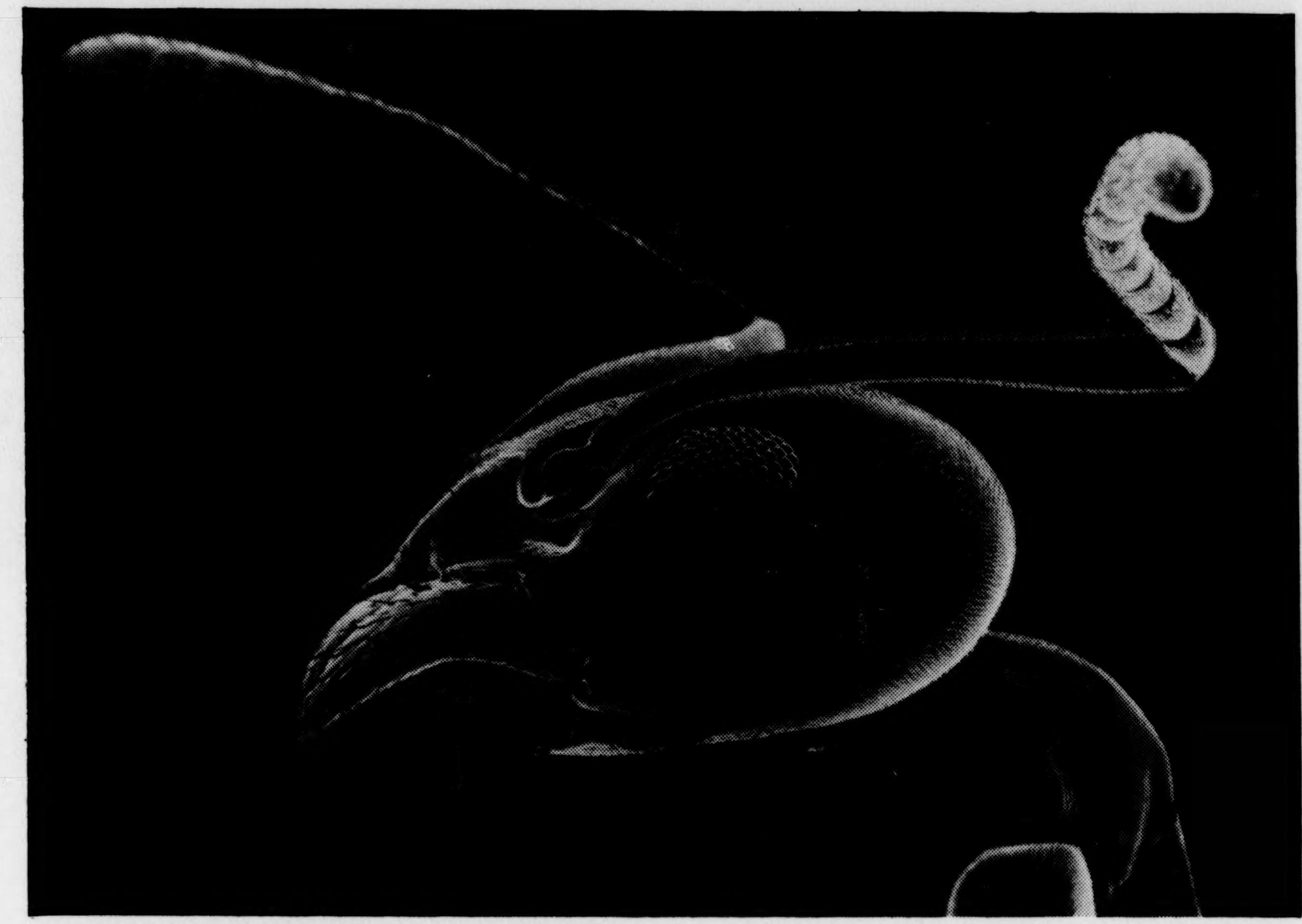
Seeds 30-31

> Eat the eggs! Up with the Queen!

There has already been considerable dispute over the interpretation of the phrase on Seed 31. It is an important question, since all the preceding seeds can be fully understood only in the light cast by this ultimate exhortation. Dr. Rosbone ingeniously argues that the author, a wingless neuter-female worker, yearns hopelessly to be a winged male, and to found a new colony, flying upward in the nuptial flight with a new Queen. Though the text certainly permits such a reading, our conviction is that nothing in the text *supports* it – least of all the text of the immediately preceding seed, No. 30:

In hard times it is a duty, and in this case an honor, for financially more robust publications to help out periodicals that are in trouble. When I learned of the duress being suffered by the ***Journal of The Association of Therolinguistics*** *I immediately offered President West the use of* ***CQ****'s pages, figuring that besides drawing attention to an exceptionally worthy field of research, we might also attract new contributors to the pages of the* ***Journal****.*
I second the editor's call for papers on p. 34. –Stewart Brand





COPYRIGHT DAVID SCHARF, 1977, ALL RIGHTS RESERVED. FROM MAGNIFICATIONS (NWEC P. 488).

We suggest that this strange author, in the solitude of her lonely tunnel, sought to express with what means she had the ultimate blasphemy conceivable to an ant.

"Eat the eggs!" This reading, though shocking, is beyond disputation.

We venture to suggest that the confusion over Seed 31 may result from an ethnocentric interpretation of the word "up." To us, "up" is a "good" direction. Not so, or not necessarily so, to an ant. "Up" is where the food comes from, to be sure; but "down" is where security, peace, and home are to be found. "Up" is the scorching sun; the freezing night; no shelter in the beloved tunnels; exile; death. Therefore we suggest that this strange author, in the solitude of her lonely tunnel, sought with what means she had to express the ultimate blasphemy conceivable to an ant, and that the correct reading of Seeds 30-31, in human terms, is:

> Eat the eggs! Down with the Queen!

The desiccated body of a small worker was found beside Seed 31 when the manuscript was discovered. The head had been severed from the thorax, probably by the jaws of a soldier of the colony. The seeds, carefully arranged in a pattern resembling a musical stave, had not been disturbed. (Ants of the soldier cast are illiterate; thus the soldier was presumably not interested in the collection of useless seeds from which the edible germs had been removed.) No living ants were left in the colony, which was destroyed in a war with a neighboring anthill at some time subsequent to the death of the Author of the Acacia Seeds.

–G. D'Arbay, T.R. Bardol

ANNOUNCEMENT OF AN EXPEDITION

The extreme difficulty of reading Penguin has been very much lessened by the use of the underwater motion-picture camera. On film it is at least possible to repeat, and to slow down, the fluid sequences of the script, to the point where, by constant repetition and patient study, many elements of this most elegant and lively literature may be grasped, though the nuances, and perhaps the essence, must forever elude us.

It was Professor Duby who, by pointing out the remote affiliation of the script with Low Greylag, made possible the first tentative glossary of Penguin. The analogies with Dolphin which had been employed up to that time never proved very useful, and were often quite misleading.

Indeed it seemed strange that a script written almost entirely in wings, neck, and air should prove the key to the poetry of short-necked, flipper-winged water-writers. But we should not have found it so strange if we had kept in mind the fact

READER'S DIGEST SECRETS OF THE SEAS

Only when Professor Duby reminded us that penguins do not swim but fly in water, only then could the therolinguist begin to approach the sea literature of the penguin with understanding.

that penguins are, despite all evidence to the contrary, birds.

Because their script resembles Dolphin in *form*, we should never have assumed that it must resemble Dolphin in *content*. And indeed it does not. There is, of course, the same extraordinary wit, the flashes of crazy humor, the inventiveness, and the inimitable grace. In all the thousands of literatures of the Fish stock, only a few show any humor at all, and that usually of a rather simple, primitive sort; and the superb gracefulness of Shark or Tarpon is utterly different from the joyous vigor of all Cetacean scripts. The joy, the vigor, and the humor are all shared by Penguin authors; and, indeed, by many of the finer Seal *auteurs*. The temperature of the blood is a bond. But the construction of the brain, and of the womb, makes a barrier! Dolphins do not lay eggs. A world of difference lies in that simple fact.

Only when Professor Duby reminded us that penguins are birds, that they do not swim but *fly in water*, only then could the therolinguist begin to approach the sea literature of the penguin with understanding; only then could the miles of recordings already on film be restudied and, finally, appreciated.

But the difficulty of translation is still with us.

A satisfying degree of promise has already been made in Adélie. The difficulties of recording a group kinetic performance in a stormy ocean as thick as pea soup with plankton at a temperature of 31° Fahrenheit are considerable; but the perseverance of the Ross Ice Barrier Literary Circle has been fully rewarded with such passages as "Under the Iceberg," from the *Autumn Song* – a passage now world famous in the rendition by Anna Serebryakova of the Leningrad Ballet. No verbal rendering can approach the felicity of Miss Serebryakova's version. For, quite simply, there is no way to reproduce in writing the all-important *multiplicity* of the original text, so beautifully rendered by the full chorus of the Leningrad Ballet company.

Indeed, what we call "translations" from the Adélie – or from any group kinetic text – are, to put it bluntly, mere notes – libretto without the opera. The ballet version is the true translation. Nothing in words can be complete.

I therefore suggest, though the suggestion may well be greeted with frowns of anger or with hoots of laughter, that *for the therolinguist* – as opposed to the artist and the amateur – the kinetic sea writings of Penguin are the *least* promising field of study; and, further, that Adélie, for all its charm and relative simplicity, is a less promising field of study than is Emperor.

Emperor! – I anticipate my colleagues' response to this suggestion. Emperor! The most difficult, the most remote, of all the dialects of Penguin! The language of which Professor Duby himself remarked, "The literature of the emperor penguin is as forbidding, as inaccessible, as the frozen heart of Antarctica itself. Its beauties may be unearthly, but they are not for us."

Maybe. I do not underestimate the difficulties: not least of which is the imperial temperament, so much more reserved and aloof than that of any other penguin. But, paradoxically, it is just in this reserve that I place my hope. The emperor is not a solitary, but a social bird, and while on land for the breeding season dwells in colonies, as does the adélie; but these colonies are very much smaller and very much quieter than those of the adélie. The bonds between the members of an emperor colony are rather personal than social. The emperor is an individualist. Therefore I think it almost certain that the literature of the emperor will prove to be composed by single authors, instead of chorally; and therefore it will be translatable into human speech. It will be a kinetic literature, but how different from the spatially extensive, rapid, multiplex choruses of sea writing! Close analysis, and genuine transcription, will at last be possible.

What! say my critics – Should we pack up and go to Cape Crozier, to the dark, to the blizzards, to the –60° cold, in the mere hope of recording the problematic poetry of a few strange birds who sit there, in the mid-winter dark, in the blizzards, in the –60° cold, on the eternal ice, with an egg on their feet?

And my reply is, Yes. For, like Professor Duby, my instinct tells me that the beauty of that poetry is as unearthly as anything we shall ever find on earth.

To those of my colleagues in whom the spirit of scientific curiosity and aesthetic risk is strong, I say, Imagine it: the ice, the scouring snow, the darkness, the ceaseless whine and scream of wind. In that black desolation a little band of poets crouches. They are starving; they will not eat for weeks. On the feet of each one, under the warm belly feathers, rests one large egg, thus preserved from the mortal touch of the ice. The poets cannot hear each other; they cannot see each other. They can only feel the other's *warmth*. That is their poetry, that is their art. Like all kinetic literatures, it is silent; unlike other kinetic literatures, it is all but immobile, ineffably subtle. The ruffling of a feather; the shifting of a wing; the touch, the slight, faint, warm touch of the one beside you. In unutterable, miserable, black solitude, the affirmation. In absence, presence. In death, life.

I have obtained a sizable grant from UNESCO and have stocked an expedition. There are still four places open. We leave for Antarctica on Thursday. If anyone wants to come along, welcome!

–D. Petri

EDITORIAL. BY THE PRESIDENT OF THE THEROLINGUISTICS ASSOCIATION

What is Language?

This question, central to the science of therolinguistics, has been answered – heuristically – by the very existence of the science. Language is communication. That is the axiom on which all our theory and research rest, and from which all our discoveries derive; and the success of the discoveries testifies to the validity of the axiom. But to the related, yet not identical question, What is Art? we have not yet given a satisfactory answer.

Tolstoy, in the book whose title is that very question, answered it firmly and clearly: Art, too, is communication. This answer has, I believe, been accepted without examination or criticism by therolinguistics. For example: Why do therolinguists study only animals?

Why, because plants do not communicate.

Plants do not communicate; that is a fact. Therefore plants have no language; very well; that follows from our basic axiom. Therefore, also, plants have no art. But stay! That does *not* follow from the basic axiom, but only from the unexamined Tolstoyan corollary.

What if art is not communicative?

Or, what if some art is communicative, and some art is not?

Ourselves animals, active, predators, we look (naturally enough) for an active, predatory, communicative art; and when we find it, we recognise it. The development of this power of recognition and the skills of appreciation is a recent and glorious achievement.

But I submit that, for all the tremendous advances made by therolinguistics during the last decades, we are only at the beginning of our age of discovery. We must not become slaves to our own axioms. We have not yet lifted our eyes to the vaster horizons before us. We have not faced the almost terrifying challenge of the Plant.

If a non-communicative, vegetative art exists, we must rethink the very elements of our science, and learn a whole new set of techniques.

For it is simply not possible to bring the critical and technical skills appropriate to the study of Weasel murder mysteries, or Batrachian erotica, or the tunnel sagas of the earthworm, to bear on the art of the redwood or the zucchini.

This is proved conclusively by the failure – a noble failure – of the efforts of Dr. Srivas, in Calcutta, using time-lapse photography, to produce a lexicon of Sunflower. His attempt was daring, but doomed to failure. For his approach was kinetic – a method appropriate to the *communicative* arts of the tortoise, the oyster, and the sloth. He saw the extreme slowness of the kinesis of plants, and only that, as the problem to be solved.

But the problem was far greater. The art he sought, if it exists, is a non-communicative art: and probably a non-kinetic one. It is possible that Time, the essential element, matrix, and measure of all known animal art, does not enter into vegetable art at all. The plants may use the meter of eternity. We do not know.

We do not know. All we can guess is that the putative Art of the Plant is *entirely different* from the Art of the Animal. What it is, we cannot say; we have not yet discovered it. Yet I predict with some certainty that it exists, and that when it is found it will prove to be, not an action, but a reaction: not a communication, but a reception. It will be exactly the opposite of the art we know and recognise. It will be the first *passive* art known to us.

Can we in fact know it? Can we ever understand it?

It will be immensely difficult. That is clear. But we should not despair. Remember that so late as the mid-twentieth century, most scientists, and many artists, did not believe that even Dolphin would ever be comprehensible to the human brain – or worth comprehending! Let another century pass, and we may seem equally laughable. "Do you realise," the phytolinguist will say to the aesthetic critic, "that they couldn't even read Eggplant?" And they will smile at our ignorance, as they pick up their rucksacks and hike on up to read the newly deciphered lyrics of the lichen on the north face of Pike's Peak.

And with them, or after them, may there not come that even bolder adventurer – the first geolinguist, who, ignoring the delicate, transient lyrics of the lichen, will read beneath it the still less communicative, still more passive, wholly atemporal, cold, volcanic poetry of the rocks: each one a word spoken, how long ago, by the earth itself, in the immense solitude, the immenser community, of space. ■

AN ANNOUNCEMENT FROM THE EDITOR OF THE JOURNAL OF THE ASSOCIATION OF THEROLINGUISTICS

IT IS WITH REGRET that we inform our readers that publication of the *Journal of the Association of Therolinguistics*, as such, has been discontinued. When, on the recommendation of the Senate Committee to Ridicule Pure Research, Congress voted to withdraw all federal funding of science, except for weapons development and the sum already voted for research into making conception both infallible and irreversible, it was, to be sure, a blow. When the National Science Foundation publications began appearing in pale purple hectograph ink passed from hand to hand by an underground network of unemployed ex-graduate students, it could be taken as an indication of which way the wind, so to speak, was blowing. When the Department of Defense employed a small tactical nuclear weapon against a San Diego meeting of the Society of Trillium Instrumentation Engineers, the future of open scientific communication appeared to be unmistakably clouded. We decided, however, to attempt to carry on as the organ of the Therolinguists Association, seeking funding (as the President suggests) from donations by the private sector, and finding personnel (as the President's Wife suggests) among unpaid, non-union volunteers. Unfortunately, earlier this month, Ms. Debi Springwindsdaughter, 15, high school leaver, our volunteer copy editor, was found to have absconded with the entire fund set aside for the costs of future publication ($72.06, of which $8.00 came in as subscriptions, $40.00 as a tax-deductible donation from the Farben Foundation, $18.32 as a gift from the tenth-grade science students of Statum County, Arkansas, $6.68 from the assistant editor's aunt, and $.04 as an anonymous contribution in the name of Koko the Gorilla). On the same day, our volunteer printer, Mr. E.T. Hummus, 67, retired basketball coach, became entangled in the 1866 Messey and Trollsen cast-iron rotary press donated for our use by Hi-Tek Fotprint, a wholly owned subsidiary of I.G. Farben, and was heavily rotogravured. Under these circumstances it seemed that we had no choice but to discontinue publication. Much as we wished to prove to disbelievers and scoffers that American scientific research can remain the finest in the world without funds, basic education, professional training, publication, information exchange, freedom, or respect, we found no way to do so; and though not exactly embittered by the effort, it was with a certain sense of relief that we turned at last away from Volunteerism and the Private Sector, away from all avenues approved of, or even dreamed of in moments of paranoia, by the governmental institutions in charge of presiding over the demise of intellect in the United States, and accepted – with alacrity – the offer of co-publication generously extended to us in the back seat of a VW Dasher in the Columbia Gorge by the *CoEvolution Quarterly*.

What began, then, as an announcement of cessation of publication may end on a positive note, and regret gives way to discreet jubilation. The *Journal of the Association of Therolinguistics* lives, and is actively soliciting contributions by members of the Association and by qualified students, professional or amateur, in all allied disciplines. As we consider all disciplines to be allied, we await the results of this call for papers with confident trepidation.

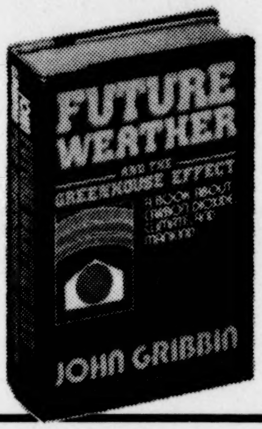
—G. West
Editor

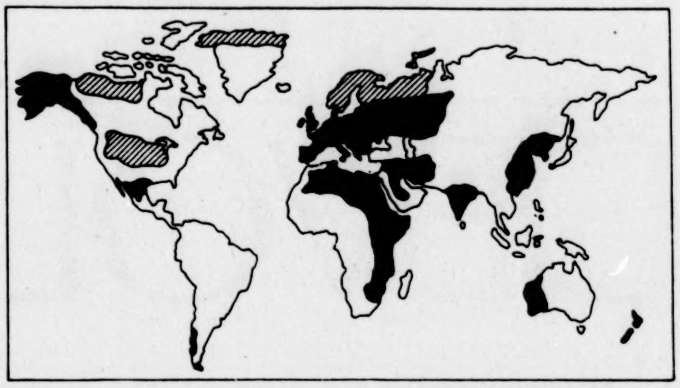
Future Weather and the Greenhouse Effect

It's getting warmer for the next 50 years. The U.S. may become a food-importing nation while parts of Canada and the Soviet Union become grain belts for the world. It's probably not a catastrophe, because it will occur slowly enough to adapt to, but over one human lifetime it will amount to enormous changes for everyone. Climate, especially climate flux, is a much greater determinant of human activity than we have acknowledged. Everyone will know that in 50 years. With this book you can know it now and act accordingly.

I know of no other field of science where there is such agreement by a whole discipline on what lies ahead. This book well covers the central doctrine and its peripheral insights. —*Stewart Brand*

Future Weather and the Greenhouse Effect
(A book about carbon dioxide, climate, and mankind)
John Gribbin
1982; 320 pp.
$15.95 postpaid from:
Delacorte Press
1 Dag Hammerskjold Plaza
245 East 47th Street
New York, NY 10017
or Whole Earth Bookstore





Will Kellogg's reconstruction of rainfall distribution when the Earth was warmer than today, during the Hypsithermal between four thousand and eight thousand years ago. Some parts of the world (black) were wetter than today; others (shaded) were drier. Information is lacking for blank areas.

•

At the present rate of destruction, there will be no tropical rain forest left by the end of the present century, and that complete removal of one piece of the environmental jigsaw puzzle might have far more dramatic repercussions than any release of carbon dioxide from burning fossil fuels. But the forest is not being destroyed to feed the hungry mouths of the Third World. In what Norman Myers calls "the hamburger connection," nearly 40 percent of the forest cover in Central America has been turned into pasture to feed the cattle that in turn end up in the products of North America's fast food industry. Economizing on food — or at least avoiding waste — might be an even more practical contribution to solving the carbon dioxide problem than economizing on energy, at least for those of us living in the rich North.

Horned Lizards

Out here, west of the 100th meridian, you never know when, a piece of earth or rock suddenly becomes alive — turns into a miniature, scaly reptile reminiscent of prehistoric horned dinosaurs. The appearance of these gamboling "toads" (they're not toads, of course) invariably tickles out a smile, even a suspicion that the rest of the day will go right.

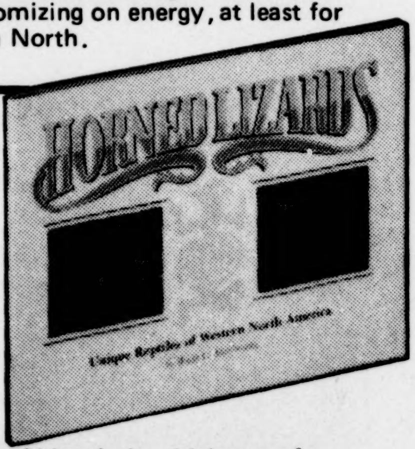
Eaters of underworld ants, lovers of sand and sun, good omen to humans who get to know them, the horned lizards have always deserved the intimacy, attention, and prose that Wade Sherbrooke lavishes on them here. Gorgeous photos. Elegant design. The horned lizard bible deluxe. —*Peter Warshall*

•

Before a horned lizard squirts blood it arches its back defensively and closes its eyes. The eyeballs soon protrude and the eyelids become swollen, engorged with blood. Suddenly very fine streams of blood, the thickness of a horsehair, shoot out from the edges of the closed eyelids. Sometimes there is a popping sound as the spray begins. The blood may spray as far as four feet, comes from one or both eyes, and is directed forward or backward.

The apparent purpose of blood spraying is defensive. Like other defenses it provides protection only from certain predators. Yet no one defense protects a horned lizard from all its enemies.

Horned Lizards
Wade Sherbrooke
1981; 48 pp.
$6.45 postpaid from:
Southwest Parks and
Monument Association
P.O. Box 1562
Globe, AZ 85501



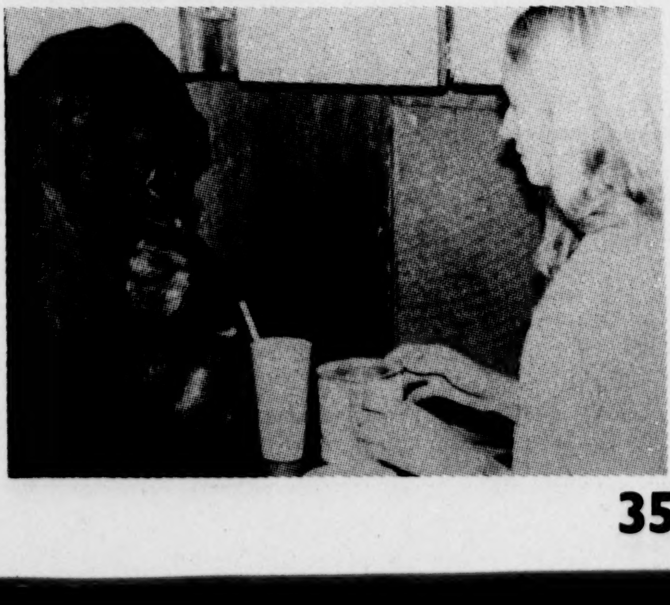
The Education of Koko

The fascinating account of teaching a foreign language to a gorilla. Communicating via American Sign Language for over nine years now with a young female gorilla named Koko, Francine Patterson and associates have revised our understanding of primates, of humans, and of language. **The Education of Koko** *is also a classic, revolutionary, pet book. (For work on other species' native languages, see The Journal of the Association of Therolinguistics on our page 30.)* —*Stewart Brand*
[Suggested by John Caster]

The Education of Koko
Francine Patterson and
Eugene Linden
1981; 240 pp.
$9.10 postpaid from:
Holt, Rinehart, and Winston
383 Madison Avenue
New York, NY 10017
(Available April 25, 1983)
or Whole Earth Bookstore

The Education of
KOKO

Koko adds complexity to her signed utterances by modulating them. Here, the camera catches her partway through signing hurry pour there and drink. She shakes her right hand for hurry; signs a modified pour (made by turning the thumb of a fisted hand down); indicates there by pointing to the cup with her thumb; and simultaneously signs drink with her left hand.



DEVOLUTION

by Austin Meredith *Illustrations by Arthur Okamura*

The history of our form of life on this planet, non-other-limited life, is a history of extinctions through excess of success. Were we not an intelligent species, capable of some minor comprehension of what we are doing as we do it, our extinction would come sometime within the next four human generations. With intelligent and deliberate self-limitation, we may last a bit longer.

> **The name of the bow is Life, but its work is Death.** —*Herakleitos*

ON THE GENERAL TOPIC OF EXtinctions and evolutionary progress, Charles Robert Darwin wrote to Alpheus Hyatt in 1872: "No doubt many new laws remain to be discovered. Permit me to add that I have never been so foolish as to imagine that I have succeeded in doing more than to lay down some of the broad outlines of the origin of species. After long reflection I cannot avoid the conviction that no innate tendency to progressive development exists, as is now held by so many able naturalists, and perhaps by yourself" (Darwin, 1903). In this paper we will explore the dark other side of the evolutionary coin, which I here term "**devolution** thru reproductive success." This dark side of descent has been at least partly glimpsed previously by Ernst Walter Mayr and by Karl Raimund Popper, and perhaps by many others who seem to have been emotionally unprepared to follow up on such a dark vision.

It has also been glimpsed by the great inhumanist poet John Robinson Jeffers, who prepared himself for the beautiful power of a god who, secretly smiling, "piles up cities for the poem of their fall/ and gathers multitude like game to be hunted when the season comes." (You should read his poem "Passenger Pigeons" on page 45.)

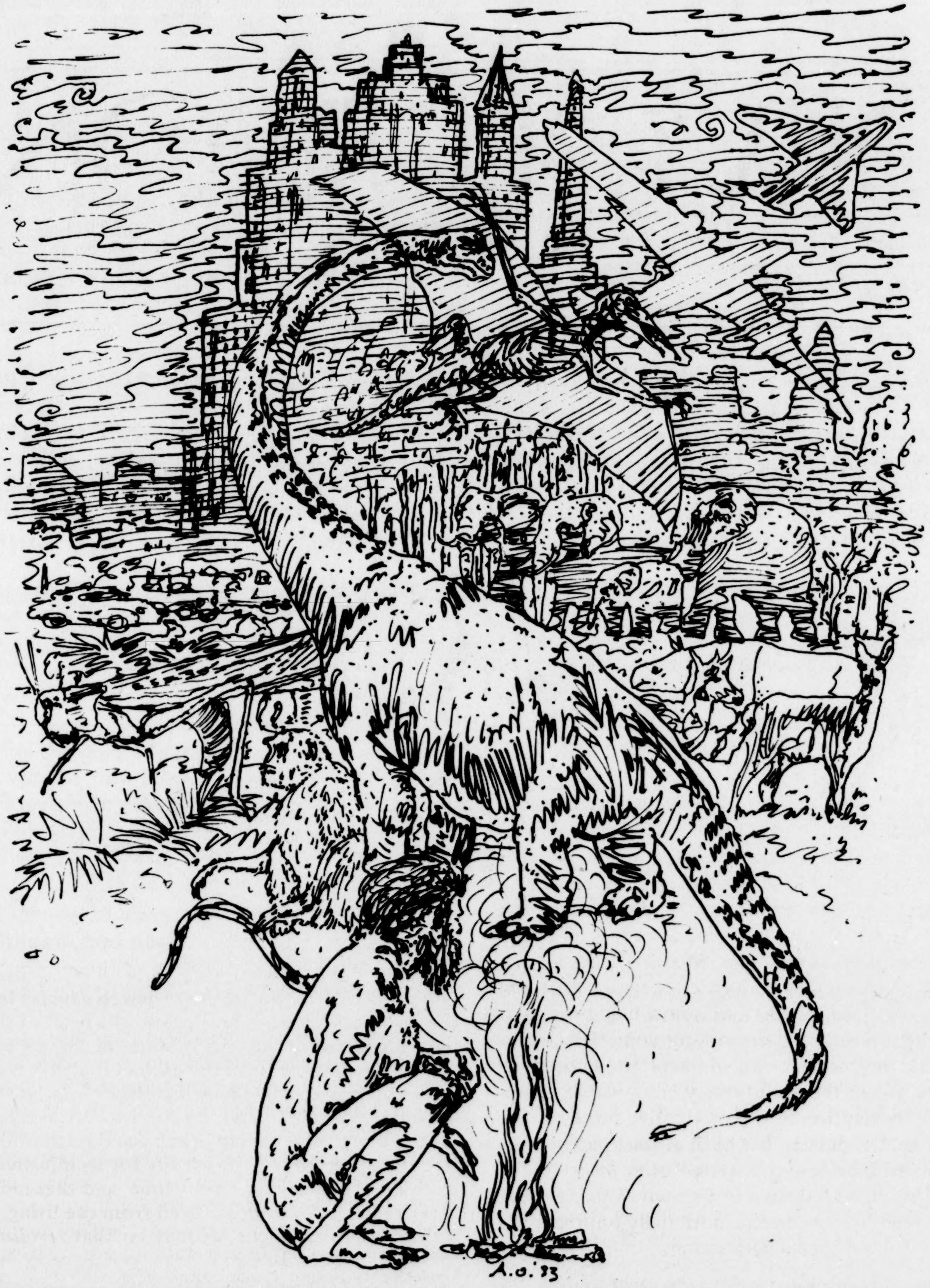
It is common to regard the history of the evolution of life as a triumph of the fit over the unfit,

DEVOLUTION **As the crown jewels *devolve* from the head of the dead monarch to the head of the new monarch, so the crown of life in a niche can be said to *devolve* from the extinct indigene to the living intrusive; when a niche temporarily closes through exhaustion and the species occupying it becomes extinct, paying penalty and retribution to the ecosystem which gave it life for its injustice according to the assessment of time, and that niche later reopens to be inosculated from the living things of another niche, we may say that *devolution* has again taken place as it has taken place so many times in the bone-laden past.**

Here is an ecological, apocalyptic variation on the theme that nothing fails like success. When the original (slightly different) version of this article appeared in the British **Journal of Theoretical Biology** *last May it was called everything from a "pedantic fairy tale" (by an anonymous referee for the* **Journal***) to a "strikingly original and valuable paper" (by* **Stalking the Wild Taboo** *author Garrett Hardin). Austin Meredith is a softspoken, self-taught amateur biologist with a gleefully detached air who conceived his theory while living cut off from humans in the Sierra National Forest. Previously, he'd been a graduate student of philosophy at Harvard, a systems analyst and operations researcher for General Electric, and a coerced staff member for the Shah of Iran's martial law apparatus before and during the 1978 Iranian revolution. Silviculturist Philip Stewart responds to "Devolution" afterwards with a genial rebuttal based on cultural survival; look on page 12 for his follow-up to an example of devolution in action, "Deforestation in Disguise."*

Two more notes about this article: It's illustrated by painter/sculptor Arthur Okamura, who first worked for **CQ** *back in issue 1, for which he designed the cover. Some of his drawings are based on a recent series of his sculptures. You'll also notice that some terms in the article are in* **bold type**; *those are defined in Austin Meredith's acerbic glossary at the bottom of each page.*

—Art Kleiner



or of the strong over the weak, but in this paper you will see evolution regarded as the perpetuation of the marginal and the ruthless elimination of the unconstrained. The niche of a species will be presented as analogous to a host, and the species itself, whatever its role in the ecosystem, will be presented as analogous to a parasite on that host. On the basis of this analogy, and as the result of other reasoning, it will be maintained that just as a parasite species can become unwisely effective, exhaust its host, and thus exterminate itself, so also any species whose reproduction and total cumulating impact on its niche are not restrained in some effective manner efficiently exhausts its niche and thus extincts itself. This will be seen to have direct application to the predicament of our own species at the present time, and to our anthropocentric pride in being such an overwhelming success at life: we may well be too good for this world. If our species is indeed the glory of creation, then we'd best watch our act, for in biology as elsewhere hubris goeth before a fall.

With the warning that if you accept my distinctions you will accept my conclusions, let us proceed. The first distinction to be made is between those species which multiply, gigantize, or otherwise increase their ecological impact on the **carrying capa-**

city of their niche until their reproductive "cadre" is no longer capable of producing new generations of well-founded, reproductively competent individuals, and those species which are prevented from doing this by some negative limitation which effectively removes this **reproductive excess** without damage to "cadre" individuals. The former species become extinct and some of the latter species survive.

The second distinction to be made is between those species which survive because they are involved in some evolving coevolutionary relationship with another species which benefits them by furnishing a density-dependent negative **demostatic** control, and which they benefit in turn by providing nourishment or a place to hang out, and those species which survive because they possess some fortuitous internal limitation not involving any other coevolving species. The former we will term "**other-limited**" species and the latter we will term "**self-limiting**" species. (It is not intended that these be exclusive categories.)

Every characteristic of life must have originated at some particular place at some particular period in time. It will be mentioned here, but not substantiated, that the development of the first other-limited symbiotic associations in the first real ecosystems was a grand event of enormous repercussions, suitable as a cause for the immense explosion of the complexity, stability and diversity of life in the **Cambrian** period (Stanley, 1973). And that the fortuitous origination of the negative self-limiting-feedback system entirely within one species was also a grand event of enormous repercussions, suitable as a cause for the explosion of the bird and mammal species in the **Cenozoic** era. It is my

CARRYING CAPACITY The maximum level of exploitation which a niche can withstand without such wide oscillations in the life-support resources of the niche as to cause undernourishment of habitat populations. A level of cumulating impact not easily predicted in advance, but quite readily noticed with the benefit of hindsight.

REPRODUCTIVE EXCESS Any surplus of births over deaths. Having an excess of births over deaths, or the capacity to produce this, is the only safe strategy, for it prevents a species from suffering Darwinian scarcity-extinction. Disposing of this reproductive excess capability is the only safe strategy, for it prevents that species from suffering success-extinction.

DEMOSTAT Any factor which effectively impedes population or impact expansion, through becoming more intense as expansion proceeds. Often termed "population-control mechanism" by those who believe falsely that any demostat can evolve or be maintained by evolution.

OTHER-LIMITATION The process by which one species comes to be useful to another species, as leopards coevolve with their dinners (gazelles) and as cow-birds coevolve with their foster-parents (swifts), by solving for that species the problem of how to dispose of its excess reproductive potential and avoid an ecospasm due to excessive impact. Removal of many members of the limited population enables maximal nutrition of the remainder, and also keeps things interesting.

SELF-LIMITATION The fortuitous event in which a species temporarily interferes with its own reproductive success, by impeding itself with some negative demostatic control destructive of any excess individuals whenever and wherever such excess individuals are spawned, when this demostat does not impact the nutritional well-foundedness and reproductive vigor of a "cadre" of the species capable of perpetuating the species, and when this self-limitation is effective without assistance from other coevolving species such as predators or parasites or epizootics. It is my contention that the characteristic of birds and mammals which has enabled them to dominate the Cenozoic and the most recent moments of evolution has been a density-dependent spacing mechanism of self-limitation of impact dependent upon the destructive stress of repeated encounters with strange conspecifics.

CAMBRIAN Period during which early life-forms finally acquired the ability to predate and parasitize one another, thus greatly stabilizing the planet's surface through the creation of the first ecosystems. The transition from preCambrian to Cambrian was marked by the evolution of other-limitation, which enabled life to undergo an explosion of complexity, diversity and stability.

insistence that the first occurrence of such limitation, other-limitation and then self-limitation, must have been of vastly greater significance than the development of sexual reproduction, or of air-breathing lungs, or of any of the other mere mechanisms of self-maintenance which we use to mark the chapters of the conventional story of evolutionary progress.

The theory of descent with modification allows the members of a symbiotic association of other-limited species to coevolve. Excess removes excess. As the prey species becomes more **efficient** in avoiding predation, the normal course of events is for the predator species to become more efficient at accomplishing its predations, and vice versa. Coevolution. Other-limiting mechanisms tend to arise in the course of evolution and, once originated, they tend to be maintained by **maintenance selection**. Under such circumstances fitness is harmless, for it is promptly removed by fitness and the limits of a limited planet are not tempted.

The theory of descent with modification makes the origination of self-limiting factors an exceedingly improbable event. Under almost any conceivable circumstance other than the founder effect, the law of competitive exclusion requires that a more-fecund population will quickly replace a less-fecund population, defining fecundity in terms of the **grandparent test**. Self-limitation will persist in a world governed by the theory of descent with modification only so long as it is unchallenged by any subpopulation which has acquired the ability to infiltrate such a self-limit barrier. Rather than self-limitations being maintained thru maintenance-selection, as other-limitation is maintained thru such selection, self-limiting factors are promptly destroyed thru **filiatistic selection** once some individuals of the population have acquired the ability to beat the system.

Other-limitation evolves; self-limitation devolves; earth abides.

Leaving nonvertebrates out of consideration due to my ignorance, it may be that self-limitation has arisen only once, perhaps thru some chance "Adam and Eve" situation in the early Cenozoic in which all bird species and all mammal species were presaged in one species made up of two individuals, each of which happened to possess the same genetically determined mechanism of demostatic self-control. Or it may be that this has happened twice, once for birds and once for mammals. It is exceedingly improbable that the correlatable demostats of the various present species of birds and mammals were each created in a separate event of fortuitous evolution.

It is contrary to all Darwinian theory to hypothesize, as so many do these days, that demostatic mechanisms of self-limitation originate in order to preserve species which would otherwise destroy themselves thru population excess or thru some other form of excess impact, and it is contrary to the theory of descent with modification as we

PRECAMBRIAN Long period prior to the development of other-limitation and the formation of the first ecosystems, in which population explosion, positive limitation and collapse followed on the heels of population explosion, positive limitation and collapse. During this extensive period, 449/500ths of the history of life on this planet, conditions were so unstable due to lack of population control that complex forms of organism had no chance to evolve.

CENOZOIC Period during which other-limited life forms first acquired the ability to self-limit their own reproductive excess within a species, without relying on any external assistance from coevolving species of the ecosystem, thus increasing the stability of the earth's ecosystems through internalization of population control. This enabled the birds and mammals to undergo an explosion of radiations into niches left empty by saurians who had lost effective coevolving predators or parasites. The transition from preCenozoic to Cenozoic was marked by the evolution of self-limitation just as the transition from preCambrian to Phanerozoic was marked by the evolution of other-limitation.

PRECENOZOIC Long period between the Cambrian development of other-limitation and the Cenozoic origin of self-limiting bird and mammal species. During this period radiation into an empty niche could be effected only by groups of interdependent species, rather than by one species acting alone, because a species which did not take its coevolving other-limiting predators or parasites along with it as it moved into an emptied niche suffered a population explosion and caused an immediate ecospasm in which the niche again emptied itself.

EFFICIENCY The presumption that if only we can go fast enough, it will no longer be necessary to steer.

MAINTENANCE SELECTION As opposed to filiatistic selection, selection for those characteristics which bring success at meeting all other life-challenges than reproduction and the passing of the grandparent test.

GRANDPARENT TEST A rough measure of the real, as opposed to the apparent, relative contribution of an individual organism in one generation to the population gene pool, combining a measurement of quantity with a measurement of quality: the number of surviving, reproductively-competent descendants at the time of death of that organism.

FILIATISTIC SELECTION Selection for that complex of phenotypic traits causally related to those genotypes which engender the greatest number of the highest-quality viable, reproductively-competent offspring. (This term originated by Garrett James Hardin.)

know it to hypothesize that, once originated, such demostatic mechanisms of self-limitation are capable of maintaining themselves thru individual selection. However, this closet providentialism or **Lamarckism** fills the minds of **hopeful biologists**, who seek in the life sciences to discover some tricky way to equate human civilization with their **extremist** fantasy of evolutionary progress. (Some do this not by toying with theory but thru the invention of counterfactual assumptions, such as the assumption that there is reproductive isolation among groups at lower than the species level, total isolation, isolation sufficient to prevent the spread of a deleterious gene even as it forces its local population into an **ecospasm** of success-extinction.) Such biologists are capable of disregarding these direct and clear and immediate derivations from standard evolutionary theory just as they are capable of staring at the strata of bones of extinct species without seeing anything at all. They are ideologues, and their ideology is not the theory of descent with modification but some semiformulated, semiconscious doctrine of strength and superiority and triumph, a wet dream which in their minds totally preempts the theory of descent with modification.

The theory of Darwin is a theory of limits. It was a generalization of the thesis of Thomas Robert Malthus and holds that only those species which take a proper tack in regard to the limited nature of the resources of this Earth will survive (**scarcity-extinction**). This concept of limitation is implicit in the Darwinian notion of competition because Darwinian competition is an interaction between similar organisms on the basis of similarity of need under circumstances in which one organism's gain must be the other organism's loss and vice versa. The propositions expressed in this paper are intended to be not only compatible with this theoretical framework of population biology on a finite spherical surface, but immediate consequences within that theoretical framework. They are not perceived by the author as esoteric or difficult. They are such immediate derivations that the question in the history and philosophy of the life sciences, of how they could have remained underived for over a century, becomes a very alarming question. Devolution is not contrary to evolution, but one of its mechanisms, which leads me to ask: How expert are we at concealing things from ourselves? What is the real function of the academic establishment?

LAMARCKISM Lamarck was wrong about extinction and Darwin was right about extinction. "Lamarckism" has become an epithet among life scientists, but the differentia between Lamarckism and Darwinism is held to be Darwin's dismissal of Lamarck's belief in the inheritance of acquired characteristics. This is curious, because it has yet to be demonstrated that Lamarck had any firm convictions about the effects of habit becoming hereditary, whereas Darwin did definitely come to this incorrect conclusion. To the devolutionary way of thinking, the proper differentia between Darwinism and Larmackism is that Lamarck was a providentialist whereas Darwin was not.

HOPEFUL BIOLOGY Biological theorization and observation channeled by a desire for the world to be the way it would need to be, if the human species were to survive and become happier and happier and more and more fulfilled. A form of intellectual blinders similar to the blinders we used to put on draft-horses, effectively preventing many scientists from accepting the real situation of our species. Often accompanied by the implicit presumption that the more humans there are, and the more powerful our human technologies, and the higher the average standard of consumption of human individuals, the less the likelihood that the human species will suffer extinction. Equivalent to the belief that the way to avoid the rock of Scylla is to sail directly into the whirlpool of Charybdis.

EXTREMISM Willingness, due to ignorance, to allow actions which have unknown impact on the carrying-capacity of one's niche. Confidence that new impact will never cause the future to differ from the past. Syn: optimism.

ECOSPASM Wide oscillations in the life-support parameters of a niche or niches, with consequent partial or total destruction of living things adapted to live in them.

SCARCITY-EXTINCTION The sort of extinction-mode visualized by Charles Robert Darwin in an effort to overcome the mental resistance of Lamarckian providentialists to the reality of species extinction, a mode characterised by a prior period of scarcity of the individuals in question. Extinction through incompetence and failure, as contrasted with extinction through overweening success and ecospasm. Extinction in which numbers go down and down to zero, and in which the spindle-diagram tapers off to a coprolitic point.

It is part of the central insanity of civilization, the pride of success, that we are presently attempting to destroy our friendly partners-in-life, the other species which limit us, so we can stand alone in the universe.

Just as trees in the forest seldom fall, but every tree falls eventually, so every self-limiting species eventually evolves to the point, thru filiastic selection, that it is able to overcome its self-limiting characteristic. Whether that mechanism is territoriality as we observe in various species of birds, or whether that mechanism is annual mass-migration of overstressed individuals as we observe in some species of small mammals, filiatistic selection eventually overwhelms the barrier and the species goes into a final lag-phase of population expansion, or gigantism, or some other form of ecological extremism, until fortuitously it becomes extinct, or until fortuitously it discovers itself being self-limited by some other self-limiting characteristic standing between itself and ecospasm, or until fortuitiously it discovers itself being other-limited by some friendly partner-in-life such as *Plasmodium falciparium*. (It is part of the central insanity of civilization, the pride of success, that we are presently attempting to destroy such friends so we can stand alone in the universe.)

While there is a tendency for fitness to build up in an ecosystem over a period of time, due to constant natural selection for fitness at the level of organisms competing with one another, this accumulation of fitness must episodically be removed by natural selection at the level of the species. At the species-level natural selection is selection of the unfit because it operates through extinction of the strongest. Selection at the one level must balance out selection at the other level, to keep life not only from becoming too unfit but also to keep life from becoming too fit: the lesson of nature is moderation in *all* things, even in fitness.

Only those self-limiting species which can radiate, placing daughter species in empty adjacent niches before they solve their problem of self-limitation and destroy themselves, continue for any geological length of time. It is only a matter of **eugenics**, how long it takes for a successful self-limiting species to get so good as to discover a way to solve the only problem it has not yet solved in its existence, the problem of how to become extinct. (A living species does not have to learn how to live, for that is a problem it has already solved; it has to learn how to die, for that is the one accomplishment it has not yet mastered.)

EUGENICS The presumption that all a species need do to avoid extinction is keep its numbers from falling to zero either through increasing the fitness of the individual or through deselecting the less fit. Equivalent to the belief that all one needs to do to prevent auto accidents is keep a full tank and be able to accelerate out of any local difficulties, this idea inhabits the minds of biologists who suppose Darwinian scarcity-extinction to be the only possible mode of extinction.

Self-limitation can be, in terms of geological time, only a "short-term" strategy, for use during brief periods in between episodes of safe other-limitation. When sustained within a protective framework of other-limitation, when assisted by the presence of parasites and epizootics and perhaps a few predators, a species with a self-limiting demostatic mechanism may be able to sustain this mechanism in effective condition, and not discover a way to beat it, evolve past it, for relatively a longer period of time, but if such a species is left without coevolving friends its future is inevitably shortened.

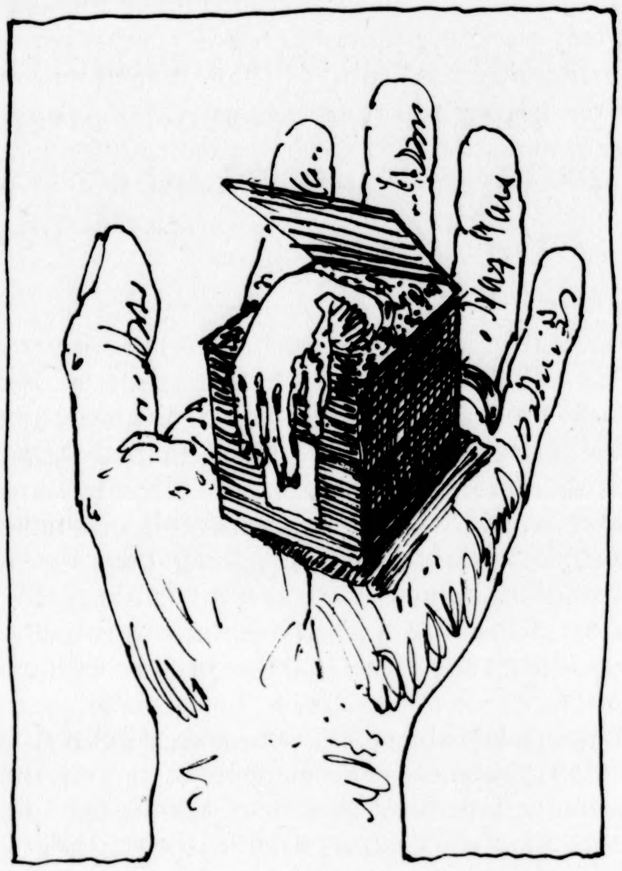
For an omnivorous, omnipresent species, there are no further niches which could be filled with differentiating daughter species. Therefore an omnivorous, omnipresent species does not radiate before it becomes extinct, and there is in such a case no distinction to be made between nominal taxonomic extinction and actual phyletic extinction. The human species in an omnivorous, omnipresent species, fated to be a dead end. The question is not whether we are going to behave in such a way as to have a grand future, but whether we have the heart to do the things necessary to enable our grandchildren and great-grandchildren to live out their lives. We stand at the culmination of 4500 years of civilized progress and expansion, and there is real question whether the earth can endure even as many as four more struggling, impacted, marginal human generations before its inevitable collapse. The question is a question of how long we will want to, and be able to, postpone this ecospasm. Could we stretch a hundred years into perhaps a thousand, thru the application of great wisdom and unprecedented self-restraint?

As a small joke on all the closet providentialists who mistake hopefulness for rationality, we might say that if they are correct, if our evolution has been providentially directed toward some final purpose, then the life sciences have discovered that the final purpose of life is to extinguish itself. Or we might put this more succinctly by saying that there is no hope, because the end of life is death. Or we might offer this humor in a non-verbal manner, by showing these closet providentialists the little black box that is available in novelty stores, the little black box with the switch that, when you flip it, causes a little plastic hand to come out of a door in the box and turn the switch back off and then disappear back into the box. As Friedrich Wilhelm Nietzsche pointed out, "Not every end is a goal. The end of a melody is not its goal; however, if the melody has not reached its end, it would also not have reached its goal. A parable."

Instead of facing this, we have hidden behind our status as the intelligent species, something unique, the cream of creation. Which means that our intelligence is a device for lying to ourselves as we allow our game to escalate toward the final solution for all our life-problems. We have conned ourselves into believing that, because of this intelligence, laws of life which obtain for all other species do not necessarily obtain for us. This is yet to be demonstrated, of course, but it is said to be "pessimism" not to believe it.

The conviction that the extinct species have been "unfit for life" has caused many biologists to commit a sampling or statistical error known as **"removal error."** Knowing that evolution is a non-random removal process by its very nature, and knowing that non-random sampling biases a sample, making it unrepresentative of the total field of study, these biologists have yet persisted in studying presently surviving species as if they were entirely representative of the subject matter of biology. This has been exacerbated by our habit of referring to our study as "the life sciences." The implicit question seems to be "What could a failure of a species possibly have to tell us about what it takes to be a success of a species?" This is implicit in such notions as "evolutionary health," and the corrective for that sort of eugenic bias must be to offer that to be a success, and to be snuffed, is also part of nature's plan.

It has been said that every biological theorist tries to prove his or her case by use of the Irish elk. In the light of this theory of devolution, or in the dark of this theory of devolution, a careful analysis needs to be made of the facts bearing on such extinctions of apparently successful megafauna, to find out whether we need to postulate some hidden flaw or whether we can merely accept that they perished thru an excess of grandeur. Likewise the other giants of the Würm/Wisconsonian glaciation, in order to determine which of these species became extinct thru the loss of a self-limiting demostat. In particular, within this present interglacial, the case of the American passenger pigeon should be reopened, to raise the possibility that the vast swarms of these passerines we saw as we intruded into our "New (meaning as yet undestroyed) World" were at the last phase of their species' path and would have done themselves into extinction whether or not we had limed them and peppered them with shot and fed their obscenely plentiful carcasses to our hogs.



We should reexamine our theories about species now exhibiting lack of population control, such as the fabled lemming, in the light of the conception of **success-extinction**. Perhaps the lemming is simply a species which is evolving to bypass an annual stress syndrome by introducing a greater and great-

REMOVAL ERROR This common statistical error springs from a false assumption that a sample which has been created by some process of selection is typical of the total population not studied. Typically, it occurs when the process of selection is supposed to be random but is not random, containing a built-in unnoticed bias. In biology the removal error frequently occurs when it is assumed that living organisms can teach us everything we need to learn about life, through disregard of the extinct species as "failures" at life who therefore could not conceivably have anything to offer to us successful types.

SUCCESS-EXTINCTION As opposed to Darwinian scarcity-extinction, in which due to general incompetence or climatic change the numbers of a species go down and down to zero, success-extinction is the phenomenon which occurs when the impact of a species on its niche goes up and up, until suddenly it also achieves zero. Extinction due to eugenics, due to overweening pride, due to an excess of success, in which a species simply becomes too good to live in a limited world.

er lag factor into the mechanism until at this point it only works every third or fourth year, as part of a trend toward exhausting its tundra environment in one last big lemospasm. As part of this effort we should attempt to discover what demostatic limit it was that our own species began to infiltrate in the disintegration of tribal society and the advent of civilization a few hundred generations ago, what violation it was which has caused our present phenomenon of citification and ideological self-justification.

Many of the misconceptions of hopeful biology cluster around the Spencerian tautology "survival of the fittest (to survive)," a tautology which taught us that the appropriate categories to use in the study of natural selection were fitness to survive vs. unfitness to survive. Since this tautology is of course logically equivalent to the inverse tautology "extinction of the fittest to become extinct" (just as the statement "this glass is half-full" and "this glass is half-empty" both describe accurately the identical real-life state of affairs), perhaps it would do some good for our confused heads if we were to exercise them for a while by thinking in terms of that alternate set of categories, fitness to become extinct vs. unfitness to become extinct. I have personally found this mental exercise to be most helpful (Meredith, 1981), although perhaps it doesn't show.

When a species, in overcoming its currently-most-limiting factor through its efficiency in passing the grandparent test of filiatistic selection, discovers that it is no longer constrained by any negative limiting factor and that instead its **lag-phase** of expansion brings it into contact only with positive limits, it is in an exceedingly precarious phase of its existence. At any point this hubris may create the sort of **cumulating total deficit** that will cause it to win its game of life, and its life-window will wink shut on it. A self-limiting species which is thus in the end phase of its **end-loaded spindle diagram** deserves a special name, and I have chosen that name on the basis of the proto-Indo/European root from which we derive in English such terms as "noxious" and "obnoxious." A self-limiting species which has overcome all self-limitation will be known as a *noxius* species, and this will be regarded as its last Waagenons or successional subspecies and used as the last term of the trinomen. Thus, for example, civilized humanity will be regarded as a successional subspecies which sprang from the *Homo sapiens sapiens* tribalists of a few hundred generations ago, after millions of years of stability, and will be known as *H. sapiens noxius*.

LAG-PHASE The period of exponential population or impact expansion following the disintegration of a demostat and preceding the encounter with another demostat, or preceding success-extinction (e.g. human civilization).

CUMULATING TOTAL DEFICIT The extent to which the consumption of the life-support resources of a niche exceeds the regeneration of these resources, causing populations to draw down the reserves available for their consumption or to die in the absence of such reserves, at any point in time.

END-LOADED SPINDLE DIAGRAM The typical spindle diagram predicted by the theory of devolution for self-limiting species is one marked by lag-phases of impact expansion and is widest just prior to success-extinction.

There are a number of factual generalizations in biology and paleontology which have been made precisely because the facts have been inexplicable in terms of the presumption that evolution means increase in fitness as a function of time. Each of these "rules" describes a situation in which fitness seems paradoxically to decrease with time: Depéret's rule that many lines of animals increase in size continually, presumably becoming more and more formidable, until extinction; Louis Dollo's law of the irreversibility of evolutionary processes; Cope's notice of the survival of the unspecialized; Ernst Heinrich Häckel's and D.H. Schindewolf's observations with regard to senescence. All these observations have been specially formulated because in the light of synthetic neo-Darwinism they are paradoxically contrary to orthodox expectation. **PseudoDarwinists** may marvel to their hearts' content over the perpetuation of the marginal, but in devolutionary theory this is not paradoxical at all, it is precisely what is predicted.

My theory of devolution also explains the phenomenon of self-toxicity in certain plants, considered by Whittaker and Feeny (1971) to be an "evolutionary paradox." Self-toxicity I take to be a type of self-limitation present in plant species, similar to territoriality in bird species, the impact of which is to prevent dangerous overcrowding. Presumably this self-toxicity could have originated in some fortuitous event of the founder-effect, and then spread by divergent speciation, in the way the stress-syndrome spread with the spread of mammalian species.

Much attention has been paid to species which seem to have evolved troublesome characteristics, such as the extravagant plumage of the male bird of paradise. This can be accounted for as a case of removal error in our thinking. Extravagant plumage, leading to heavy predation, might be just the ticket, might be precisely the item which would slow a species down enough to make it become extinct less rapidly than another similar species without extravagant plumage. And, upon

PSEUDO-DARWINISM The worship of Spencerian success and Lamarckian providentialism in the guise of biological theory (e.g. social "Darwinism," nazism, humanist speciesism).

A species that specializes in plumage excess is obviously into a much safer version of hubris than a species that specializes in messing its own nest.

the reopening of some emptied niche, it would be more probable that this niche would be **inosculated** (to use Darwin's term for radiation) by a species with such extravagant plumage, simply because the other species without extravagant plumage would already have extincted itself due to filiatistic excess. There is excess, and then there is excess. A species that specializes in plumage excess is obviously into a much safer version of hubris than is a species that specializes in reproductive excess, or a species that specializes in gigantism, or a species that specializes in messing its own nest.

There have been many attempts to demonstrate that altruism, real altruism as opposed to all the fake altruisms such as are found in kin selection, in various curious ways leads to species fitness, and is thus preserved. It is time for us to consider whether real altruism persists because it is a technique of species limitation, rendering the altruist species unfit enough to be compatible with a limited planet.

Discovery of the breakthrough which enabled the human species to abandon its sane and healthy tribalistic self-limitation and venture off into population-explosion and civilization is not automatically going to tell us what we need to do to delay our success-extinction. This phenomenon of the overthrow of self-limiting characteristics is a ratcheting phenomenon: like a ratchet it is one-way only. Once the governor has fallen off the engine, the engine races out of all control. Perhaps, however, in exploring this question of our history, we will be able to "psych" ourselves into the appropriate attitude toward limits, an attitude in which limits are not to be overcome but to be respected.

Conclusion

For an introduction to this topic of devolution, I quoted Darwin's letter to Professor Hyatt of the Massachusetts Institute of Technology, forswearing any metaphysical bias that life-phenomena must exhibit an "innate tendency to progressive development" (Darwin, 1903). By way of conclusion, I should like to suggest that perhaps Darwin was speaking to all of us. Perhaps we have, all of us, for over a century, been victimized by presumptions which cluster about our self-appointed task as apologists for the excesses of civilization. We have all assumed that eugenics is something our species needs, if only we can figure out how to accomplish it, but it may be eugenics that is destroying us and, through us, this ecosphere we call Gaia. It may be that we have been choosing to avoid the rock of Scylla by sailing straight into the whirlpool of Charybdis: "Wow, are we ever going to miss that rock by a wide margin!" It may be, if this theoretical frame is an unassailable one, that if we are to survive for any great number of generations beyond this point we must do something unprecedented in the history of life, something unnatural. What? ■

INOSCULATION The venturing of organisms of one niche into another, empty niche to which they are initially maladapted but in which they can survive due to low levels of intraspecific competition. The prime cause of the punctuation to be seen in the paleontological record.

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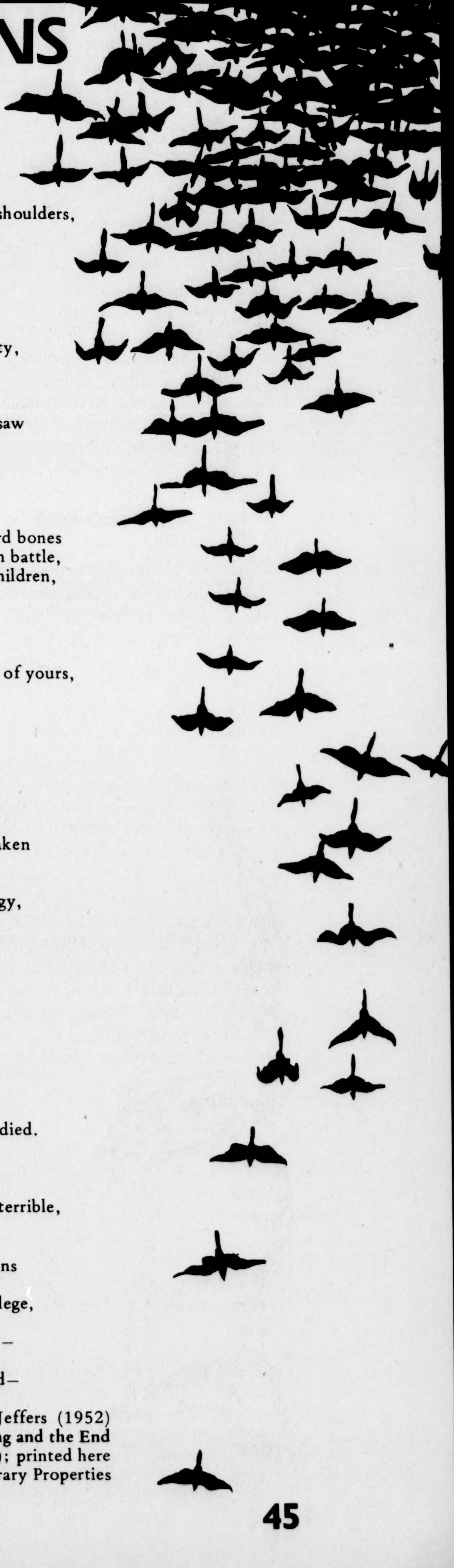
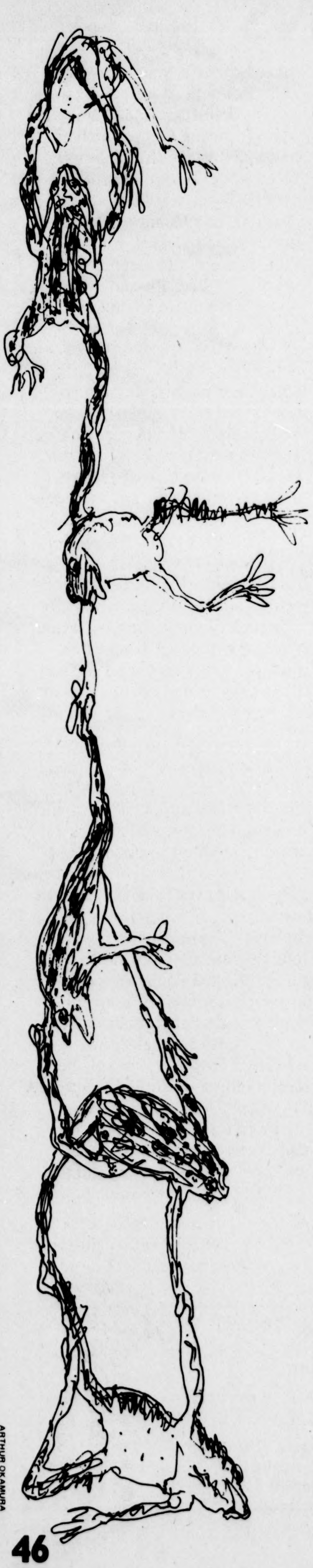
PASSENGER PIGEONS



Slowly the passenger pigeons increased, then suddenly their numbers
Became enormous, they would flatten ten miles of forest
When they flew down to roost, and the cloud of their rising
Eclipsed the dawns. They became too many, they are all dead,
Not one remains.
And the American bison: their hordes
Would hide a prairie from horizon to horizon, great heads and storm-cloud shoulders,
a torrent of life—
How many are left? For a time, for a few years, their bones
Turned the dark prairies white.
You, Death, you watch for these things,
These explosions of life: they are your food,
They make your feasts.
But turn your great rolling eyes away from humanity,
Those grossly craving black eyes. It is true we increase.
A man from Britain landing in Gaul when Rome had fallen,
He journeyed fourteen days inland through that beautiful
Rich land, the orchards and rivers and the looted villas: he reports that he saw
No living man. But now we fill up the gaps,
In spite of wars, famines and pestilences we are quite suddenly
Three billion people: our bones, ours too, would make
Wide prairies white, a beautiful snow of unburied bones:
Bones that have twitched and quivered in the nights of love,
Bones that have been shaken with laughter and hung slack in sorrow, coward bones
Worn out with trembling, strong bones broken on the rack, bones broken in battle,
Broad bones gnarled with hard labor, and the little bones of sweet young children,
and the white empty skulls,
Little carved irovy wine-jugs that used to contain
Passion and thought and love and insane delirium, where now
Not even worms live.
Respect humanity, Death, these shameless black eyes of yours,
It is not necessary to take all at once — besides that, you cannot do it.
We are too powerful,
We are men, not pigeons; you may take the old, the useless and helpless,
the cancer-bitten and the tender young,
But the human race has still history to make. For look—look now
At our achievements: we have bridled the cloud-leaper lightning,
a lion whipped by a man, to carry our messages
And work our will, we have snatched the live thunderbolt
Out of God's hands. Ha? That was little and last year—for now we have taken
The primal powers, creation and annihilation; we make new elements,
such as God never saw,
We can explode atoms and annul the fragments, nothing left but pure energy,
we shall use it
In peace and war—"Very clever," he answered, in his thin piping voice,
Cruel and a eunuch.
Roll those idiot black eyes of your
On the field-beasts, not on intelligent man,
We are not in your order. You watched the dinosaurs
Grow into horror: they had been little efts in the ditches and presently
became enormous, with leaping flanks
And tearing teeth, plated with armor, nothing could stand against them,
nothing but you,
Death, and they died. You watched the sabre-toothed tigers
Develop those huge fangs, unnecessary as our sciences, and presently they died.
You have their bones
In the oil-pits and layer-rock, you will not have ours.
With pain and wonder and labor we have bought intelligence.
We have minds like the tusks of those forgotten tigers, hypertrophied and terrible,
We have counted the stars and half understood them, we have watched
the farther galaxies fleeing away from us, wild herds
Of panic horses—or a trick of distance deceived the prism—we outfly falcons
and eagles and meteors,
Faster than sound, higher than the nourishing air; we have enormous privilege,
we do not fear you,
We have invented the jet-plane and the death-bomb and the cross of Christ—
"Oh," he said, "surely
You'll live forever"—grinning like a skull, covering his mouth with his hand—
"What could exterminate you?"

—Robinson Jeffers (1952)

Published originally in **In the Beginning and the End**
(Random House, 1954); printed here
with permission from Jeffers Literary Properties



ARTHUR OKAMURA

CULTURE IN THE EVOLUTION OF EVOLUTION

by Philip Stewart

MEREDITH WARNS us that "if you accept my distinctions you will accept my conclusions." Unfortunately I find that right in the middle of the argument a vital distinction is missing, and the conclusion therefore seems to me false in a most important way: Meredith has failed to distinguish between the human species and other animal species.

Don't get me wrong: I'm not saying that "Man the Soul-bearer" is above the laws of nature. My point is that Meredith has failed to see the difference between genetic and cultural evolution – or devolution. This is apparent in the frequent references to "the human species."

Human beings clearly are genetically a species, for no peoples have ever been found unable to interbreed. But we are not a species in the ecological/ethological sense. An animal species consists of individuals who all share the same food requirements and the same techniques for getting food. Sheep must graze, and if they destroy the grass they must die. The human analogue is a culture. Members of a culture eat much the same food as each other and they get it by the same techniques. Two different cultures – say those of the Navaho and of the Eskimo – differ as much as two different animal species.

On the surface, the history of cultures has been very like that of animal species – an endless succession of extinctions and innovations. But we are on dangerous ground here; Hitler used biological analogies to justify his abominations. We must see things very clearly if we are not to fall into that trap. It is immensely important to realize that cultural evolution is different in several ways from genetic evolution.

Firstly, cultural evolution is very rapid. It is only a few hundred generations from the Stone Age to the Cybernetic Age. Cultural change can happen so fast that an individual may no longer use in old age what he or she learned in childhood. This problem is mitigated by the fact that many people can throughout their lives go on learning new ways of behaving.

Secondly, cultural evolution has separated information from the informed organism. Genetic information can be stored and transmitted only on chromosomes. Cultural information exists in a thousand forms and can be used even when all the associated human beings are dead. For example we are now rediscovering, from old buildings and texts, ancient techniques of using radiation, insulation, convection and condensation or evaporation to heat or cool houses.

These two features make cultural adaptation vastly more powerful than genetic adaptation. If a human population extinguishes itself, it is highly improbable that the race to fill the vacated territory will be won by another species rather than by another culture. Once cultural evolution

It is easy to see when an animal species like the dodo becomes extinct; but what is the boundary of a human culture that becomes extinct?

has evolved, the whole story of evolution moves into a new phase. Genetic change in the human population is of course not abolished; culturally transmitted marriage systems and medical practices have genetic and demographic consequences. But culture is now definitely the dominant factor in our evolution.

There are other important differences between culture and species. A culture can become so varied that its members differ almost as much from each other as from members of other cultures. An American farmer has more in common with a French farmer than with an American lawyer. Subcultures or social classes become entities more real to their members than the larger culture to which they belong. The neat pattern of distinct animal species contrasts strongly with the messy picture of overlapping and interlocking human cultures. It is easy to see when an animal species like the dodo becomes extinct; but what is the boundary of a human culture that becomes extinct? Did Roman culture disappear with the death of Latin, or has it continued in another guise? For that matter, is Latin dead, and if so in what year did it die?

There is a merciful feature in cultural extinction: it does not necessarily mean the physical death of the individuals who bear the dying culture. Even Genghis Khan spared the wives and children of the peoples whose cultures he destroyed, and throughout history there have been cases of populations that have simply changed their language and religion. For example most Arabic-speaking Muslims in Egypt are descended from Coptic-speaking Christians. One by one, over many generations, families gave up speaking Coptic until the language was extinct except in church.

The analogues of Meredith's self-extinguishing species in today's world are resource-gobbling civilizations that have come to dominate the world in the last three thousand years – since the invention of empire – and especially in the last two hundred years – since the alliance of science and industry. There is now a strong probability that these civilizations will destroy their resource base and become extinct. What then?

Meredith's gloomy prophecy would only hold if modern culture had become species-wide. If all human beings were dependent on a monolithic world culture, its demise could destroy the species – if it happened too fast for any groups to evolve new cultures in time to save themselves. This looks a very unlikely scenario. There are, for example, hunter-gatherers in the world's deserts living on things like witchetty grubs and uromastix lizards. Even if the rest of us starved ourselves to extinction, these peoples would be there to inherit the Earth from us.

In fact, though, the main civilizations of the modern world are very far from forming a monolithic block. Very different fates await the beef-steel-oil-gobbling West, the sheep-eating, desert-spreading Muslim world, the Soviet Empire with its chronic poverty, India with its sacred cows, and frugal China. However, what differs most significantly is not their present behaviour but their capacity to change.

Any adaptive system must strike a balance between flexibility/entropy/capacity to change and rigidity/negentropy/capacity to endure. Too much flexibility means chaotic change, loss of existing adaptations and extinction by disintegration. Too much rigidity means failure to change, maintenance of disadapted features and extinction by obsolescence. To survive, a culture must strike a balance between these two extremes. Cultures therefore include elements that encourage flexibility and rigidity. As long as cultures remained small and illiterate, flexibility may have been ensured simply by people's inability to learn exactly what their parents did and to remember everything that they had learned. Rigidity was perhaps ensured simply by human capacity to imitate and by people's fear of the unfamiliar. Even at this early stage, though, some cultures probably taught openness to change, while others placed high value on conformity to tradition. These were clearly adequate systems for adaptation, as witness the fact that in the space of a few thousand generations preliterate cultures spread all over the planet.

In the modern world the most important device to ensure cultural flexibility is democracy – the toleration of deviant individuals and groups, which are thereby enabled to develop alternative cultures. When the culture of the host society becomes disadapted, alternative models are able to spread peacefully, allowing gradual evolution to take place. Pushed to its extreme, however, democracy may encourage such individualism that social cohesion breaks down into anarchy. However, there is perhaps a biological limit to this in the form of our inherited tendency to imitate: We have all seen "non-conformists" wearing their deviant uniform. Total anarchy may be impossible to us.

At the other pole, totalitarian cultures maintain their rigidity by a variety of means. These in-

Even if the rest of us starved ourselves to extinction, the hunter-gatherers in the world's deserts living on witchetty grubs and uromastix lizards would be there to inherit the Earth from us.

If the ideas of conscious evolution are more adaptive than others, they will survive and spread even against force.

clude central control of information, persecution and suppression of deviant groups, and propagation of a doctrine contained in an authoritative book such as the **Bible**, the **Koran**, **Das Kapital** or **Mein Kampf** (it is of course the use made of such books, not their content, that is meant here). Even without modern technology it proved possible to maintain certain cultures substantially unchanged over many hundreds of years. Twentieth century techniques of propaganda and surveillance make possible a degree of cultural rigidity undreamed of in earlier times.

Inevitably, over-rigid cultures become disadapted to a changing world. When the resulting strains become intolerable, leading to great suffering for many citizens, the system breaks down and there is revolutionary change. Unfortunately, in the absence of deviant groups that have had the freedom to evolve an alternative culture, the revolution usually brings to power an insecure group whose experience has been in clandestine political activity, and they clamp down a new orthodoxy as rigid as the old.

The invention of democracy has such a great potential for speeding and smoothing adaptation that it seems almost as important an event in the evolution of evolution as the introduction of culture. That is not to say that the existing democracies are in every respect more adaptive than their totalitarian rivals. A state that has a few formal features of democracy is still far from fully democratic if most of its citizens are passive spectators of public life. We are still far from knowing the full potential of the system, which is as yet at an early stage in its evolution. Meanwhile, inside the democracies, a new culture of immense potential seems to be hatching; let us call it (self-)conscious evolution.

Once people become conscious of their own mental life as part of the evolutionary process, several things happen. Two of them are particularly important in the present discussion. Firstly, it becomes possible to speed up the pace of cultural evolution by propagating techniques for personal development. This should give an improvement over haphazard cultural change as great as that obtained by replacing genetic by cultural evolution. Subcultures inspired by conscious evolution are spreading with extraordinary speed, which is proof of its immense adaptive potential, and the sign that a new chapter in evolution is opening.

Secondly, once mind is conscious of itself as part of evolution, kinship is established with all the other evolving populations of animals, plants, and microbes. The way is thus opened to a new relationship with the biological world, seeing human beings not as the masters of nature but as senior partners in evolution, with an interest in making room for our junior partners to survive and evolve. Already the fruits of the new thinking are visible in dozens of movements unimaginable a hundred or even 20 years ago — Friends of the Earth, Greenpeace, the Tropical Forest Campaign. . . .

This is getting very close to home, for the **Whole Earth Catalog** was one of the first manifestations of a new culture of conscious evolution. Am I not being as naive as cultural nationalists, who proudly claim that their own culture is superior to all others, or religious bigots, who condemn all people of other faiths to eternal damnation? Certainly I have one thing in common with them: I believe in my own culture, and I reject the fashionable idea that all cultures are of equal value; that is a short step from saying that no culture is as good as any culture. If it does not matter which culture you embrace, does it matter whether you embrace one at all?

However, unlike national cultures or traditional religions, conscious evolution is not a culture but a small set of very powerful ideas on which a great variety of cultures, in every possible language, may grow. Indeed it can draw into itself many elements from older cultures or religions, becoming the vehicle for their survival. This very feature makes it very difficult to see the boundaries of the new movement, and its lack of any defined membership or organization sets it apart from any older cultural movement. Indeed there are fierce disagreements among those who inspire themselves from conscious evolution, as witness the recent outcry over the advocacy of sadism in **CoEvolution Quarterly** (Spring '82). There is no question of saying, "My brother right or wrong!"

Not being the culture of an identifiable group, conscious evolution cannot be drawn into the violent conflict that is characteristic of differences between human groups; there is no question of using force to spread its ideas. The very thought is laughable, for if the ideas are more adaptive than others, they will survive and spread even against force, and that is all that is claimed for them. They do not demand any proud assertion of superiority, nor any arrogant contempt for the less adaptive ideas that confront them.

Despite my faith in conscious evolution I am not naively optimistic. There is terrible power in the rigid cultures, and there are grave weaknesses in the democracies. By specializing as a military civilization (specialization being a form of rigidity) the Soviet Empire may snuff out the democracies one by one, as Sparta overwhelmed Athens. Alternatively, a world war for control of dwindling resources could hand the Earth over to the witchetty-grub people or to the ants, setting back cultural evolution by thousands or millions of years. We are in a race against time, and the planet as we know it may be saved only if conscious evolution spreads fast enough. Still, even if the worst happens here on Earth, I am confident that some day, somewhere in the Universe, evolution will evolve beyond the point that we know. ■

The Tangled Wing

The Tangled Wing
(Biological Constraints on
the Human Spirit)
Melvin Konner
1982; 546 pp.
$20.55 postpaid from:
Holt, Rinehart and Winston
383 Madison Avenue
New York, NY 10017
or Whole Earth
Bookstore

THE TANGLED WING
BIOLOGICAL CONSTRAINTS ON THE HUMAN SPIRIT

How to take biology personally (and accurately for a change). The dubious wealth of books in recent years on the animal origins of human behavior mostly are propaganda, conservative or liberal, drawing very large conclusions from small data by way of massive speculation. This book is as entertaining as the propaganda ones, even more so, but manages to enlighten (rather than endarken) by maximizing observation rather than speculation.

Student of biological anthropology and medicine as well as occasional poet, author Konner skillfully weaves a seamless fabric connecting our behavior, body, tribal past and contemporaries, evolutionary trail, and fellow creatures. There is much to be learned in the care and feeding and especially understanding of one's healthy animal.

—Stewart Brand

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We could have explored the specific significance, in terms of what is now known about behavioral physiology, of the fact that most people who run the world — its politics and its armies — do so on a chronic insufficiency of sleep; with personal health declining more rapidly than that of their age-mates in other walks of life; and under conditions characterized by an unnaturally high density of social interactions (particularly with strangers), by constant extreme stress, and by fear — ranging from fear of loss of influence to fear of assassination. These and other features of their personal biological lives are not without known effects on the biological tendency to violence and threats of violence.

●

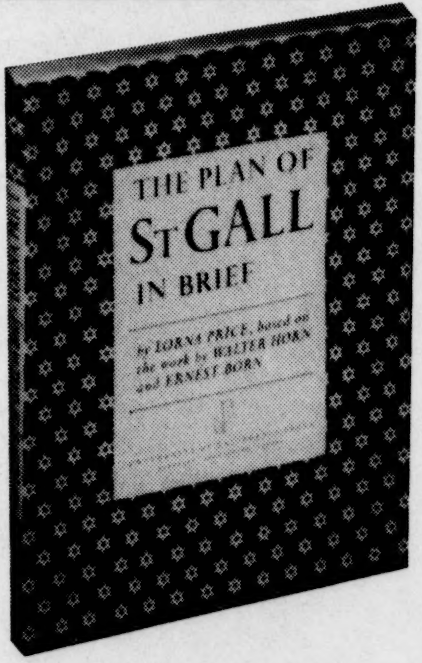
It has been shown that animals deprived of REM (dream) sleep will increase their rates of feeding, sexual behavior, and brain self-stimulation in brain regions known to produce reward. Furthermore, REM-deprived animals that are allowed self-stimulation of the brain will not "catch up on" REM sleep when they are allowed to, as other REM-deprived animals will. These findings give rise to the utterly fascinating suggestion that rewarding self-stimulation of the brain is somehow a substitute for dreaming; this apparent equivalence, if true, would seem to confirm both the notion of self-stimulation of the brain as pleasure and the notion of dreams as wish fulfillment.

●

Eating a large carbohydrate meal increases the uptake of the amino acid tryptophan by the brain, by altering the balance of amino acid competition at the blood-brain barrier. This has significance for brain function because increasing brain tryptophan increases brain serotonin, the neurotransmitter made from it. Since there is good evidence that increasing serotonin activity inhibits sexual behavior in laboratory animals, this finding about carbohydrates lends credence to the bit of culinary folklore that says that if a woman wants a man to perform she should not fill him up with a potful of starch at dinner.

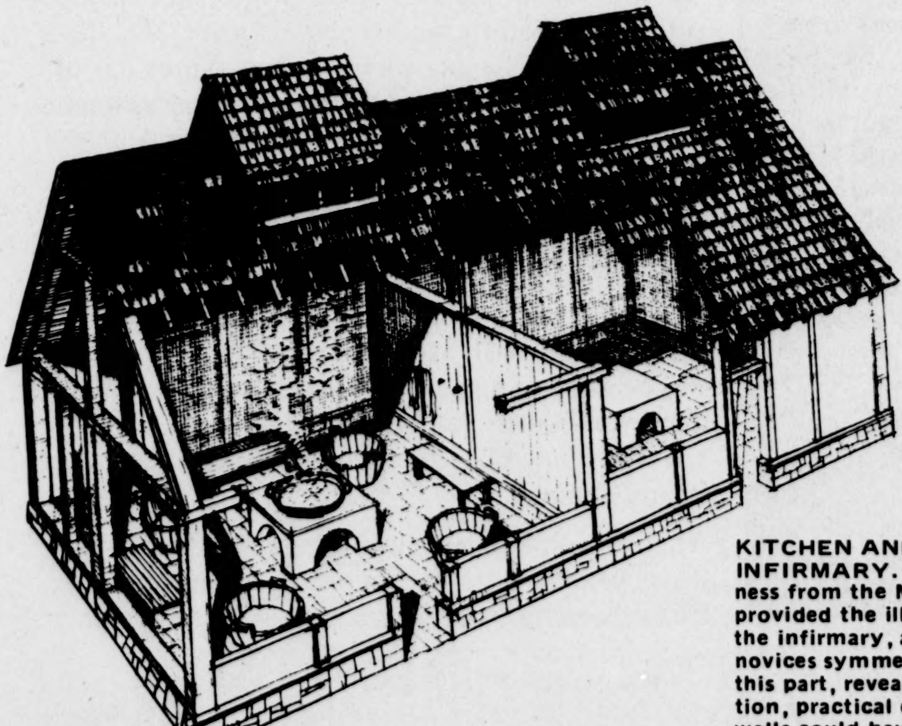
The Plan of St. Gall in Brief

The Plan of St. Gall in Brief
Lorna Price
1982; 104 pp.
$29 postpaid from:
University of California Press
Order Department
2223 Fulton Street
Berkeley, CA 94720
or Whole Earth
Bookstore


THE PLAN OF
St GALL
IN BRIEF
by LORNA PRICE, based on the work by WALTER HORN and ERNEST BORN

One of the most thrilling publications in years, the three-volume **Plan of St. Gall,** *also had a thrilling price — $450 (***NWEC** *p. 36). The new condensed $30 100-page version has a surprising amount of the thrill intact. The richness of the color, the wealth of models, drawings, diagrams, maps, leads you into the heart of deeply civilized intelligence circa 800 A.D. The Plan of St. Gall is the smartest intentional community (monastery, in this case) ever designed.*

—Stewart Brand

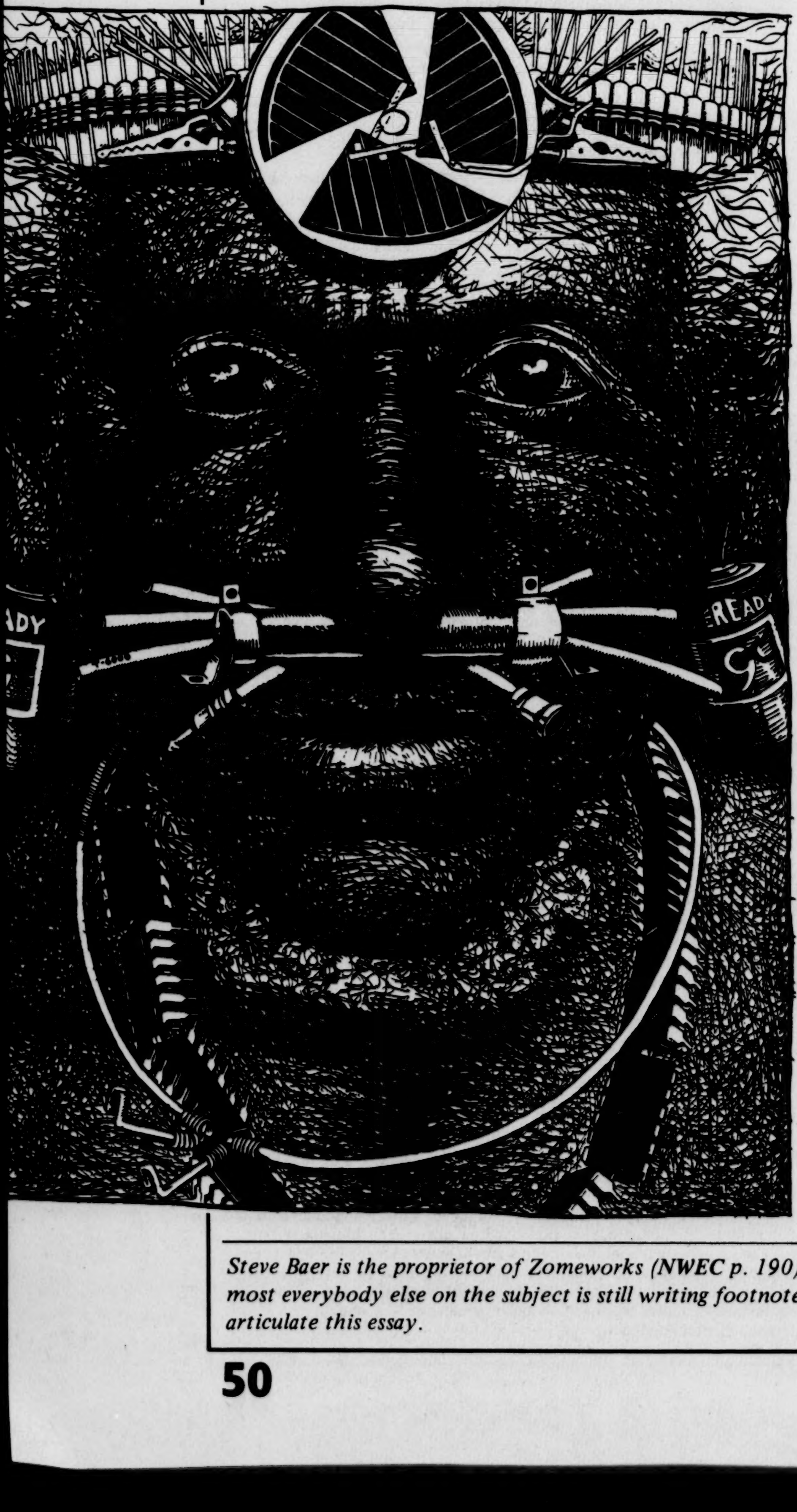


KITCHEN AND BATHHOUSE OF NOVITIATE AND INFIRMARY. Because of their different diets and remoteness from the Monks' Kitchen and Bathhouse, the planner provided the ill with a kitchen-bath building adjacent to the infirmary, and a similar kitchen-bath building for the novices symmetrically located on the south. The Plan, in this part, reveals remarkable responsiveness to administration, practical convenience, and professional care. The walls could have been of masonry where we show timber construction.

TEAMWORK

by *Steve Baer*

Illustrated by Matthew Wuerker



IT IS OFTEN IMPORTANT to give customers a card. They need to remember you, your name, the company you work for and what you do. There is something else here that is important: Don't have a handwritten card. The card should be printed, not on a typewriter or by hand lettering but by a printing press. The person to whom you give the card does not want your autograph. Besides needing the information on the card, he will be reassured by a glimpse of machines behind you. Of course you yourself are there, but the introduction should be blessed by the other part of a proper team; you want an introduction by a robot. Don't imagine that your customer is prejudiced against people or against what you can do with your hand and a pen. He is merely investigating to be sure you are part of a bigger team of men and machines. Later, after you are over this first hurdle, the letter that you send him should have your own signature on the bottom. You need to use your hand and a pen here. Otherwise he will suspect that you were merely bait for a collection of machines. A balance must continue to be affirmed. If you ever present yourself to strangers without the scent of the latest mechanism, you will encourage skepticism and distrust, just as a man on foot will make dogs, who expect men to pass by in cars, get up and bark. . . .

As the mechanisms increase and begin to take over more and more activities, you can bet that they will mind their manners. Teamwork and balance is the only road to success, even if some of it has to be faked. The day when a robot climbs out of the car to come and peddle the company's latest kind of lockwasher, it won't be passing out printed cards. It will be equipped with a fountain pen and a hard-to-read scrawl. You will at first gasp as the machine pulls off its animallike introduction. It will even hesitate to remember its extension number at the home office (it will probably park itself in a rack). The robot will be allowed any animallike idiosyncracy and may even boost sales by wetting its pants if kept in conversation while it needs to stop at the restroom.

What accounts for this widespread need for evidence of teamwork between men and machines? Past success. Men and machines working together

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Steve Baer is the proprietor of Zomeworks (NWEC p. 190) and a sharp analyzer of the people-technology dance; most everybody else on the subject is still writing footnotes to McLuhan. He told us to credit Bob Hymer with helping articulate this essay.
–Art Kleiner

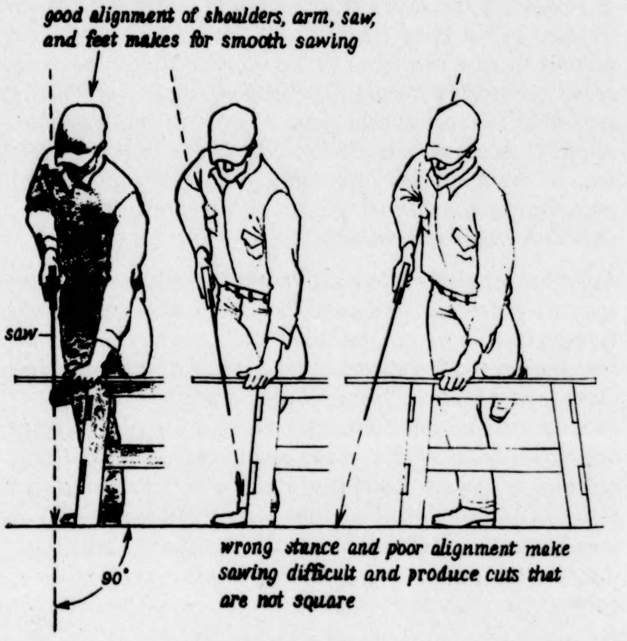
produce. Men have grown rich and powerful because of their partnership with machines. If people were at first suspicious of men when they introduced machines, it is no longer so. We are now suspicious if anyone tries something alone. This is taken to extremes: Without a dose of a machine's electricity, plain human speech is suspect. Obliging hosts, not wishing to offend, provide microphones for speakers at tiny gatherings. This is only good manners, even though there are only 20 people at the Kiwanis Club meeting.

The human touch is out of place on your business card and also in the exterior of a product. It's the duty of the appearance to demonstrate a pure machine origin. The human touch, at this stage, will be confined to the literature or perhaps silly decoration.

I recall a typical example at a recent trade fair. We set up a sample of one of our heat exchangers, a good heat exchanger, simply made but by a method not usual in metal working. The shape resembled a potter's hand work more than that of mechanical rollers or giant presses. The price and performance were excellent but the product smelled too much of the animal and too little of the machine, even though it was all machine made. A passerby looked at it and as he left, he remarked, without needing to examine the product further, "It looks handmade." After this comment there was little to say. The price and performance could not redeem such bad manners.

Struggle to understand what is going on between us and our machinery and you conclude that the machine is like a new sex, opposite to that of all people. Its presence and our relations with it are making us extremely fruitful but there are manners and customs being produced that we can't yet explain and the machines don't talk about. The man who didn't want a handmade heat exchanger was simply being chivalrous to machinery. The handmade product, or the product that appears to be handmade, when offered to a mass market is offensive because it speaks of its maker's selfish refusal to become married to the many machines waiting to help. Promoters of such techniques are spotted as production perverts, homofabricators instead of heterofabricators, and the lumpy metal that looked as if it had been shaped by hand yet sits on the same aisle with the products of mills, lathes, and screw machines is simply, regardless of price or performance, an embarassment. ■

Hand Tools


good alignment of shoulders, arm, saw, and feet makes for smooth sawing
saw
90°
wrong stance and poor alignment make sawing difficult and produce cuts that are not square

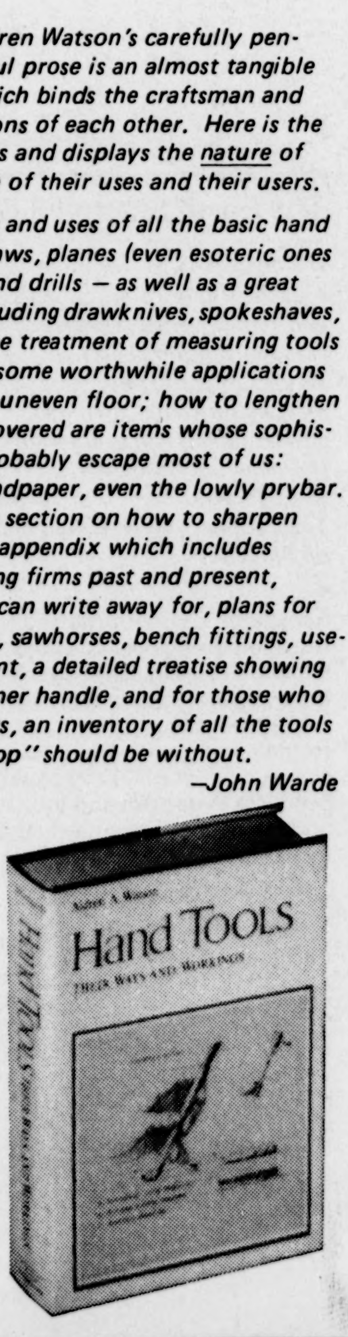
I highly recommend **Hand Tools** *by Aldren A. Watson, illustrator and early American extraordinaire (see his* **Country Furniture, NWEC** *p. 250). I'm a fumble-thumb with anything more complex than a pair of pliers (generally used to crack pecans), but after reading carefully through Chapter Nine (on the drawknife) I found I was actually able to replace two broken slats on an old, old East Texas-type slat-back kitchen chair without going through half a lumberyard.* —*Michael Kalen Smith*

What comes through in Aldren Watson's carefully penciled pictures and thoughtful prose is an almost tangible feeling of that very link which binds the craftsman and his tools together as functions of each other. Here is the work of an artist who senses and displays the nature of tools, really, and the nature of their uses and their users.

Chapters cover descriptions and uses of all the basic hand tools — hammers, chisels, saws, planes (even esoteric ones such as the Stanley 248), and drills — as well as a great many uncommon items including drawknives, spokeshaves, and inshaves. There is a fine treatment of measuring tools and how to use them, plus some worthwhile applications (leveling a cabinet to fit an uneven floor; how to lengthen the legs of a table). Also covered are items whose sophistication of design would probably escape most of us: pliers, nailsets, scrapers, sandpaper, even the lowly prybar. Finally, there is a complete section on how to sharpen everything, and a generous appendix which includes names of famous toolmaking firms past and present, available tool catalogs you can write away for, plans for all manner of workbenches, sawhorses, bench fittings, useful jigs, and other equipment, a detailed treatise showing how to properly fit a hammer handle, and for those who just can't get enough of lists, an inventory of all the tools no "Typical Hand Tool Shop" should be without.

—*John Warde*

Hand Tools
Aldren A. Watson
1982; 416 pp.
$29.95 postpaid from:
W.W. Norton and Company
500 Fifth Avenue
New York, NY 10110
or Whole Earth
Book Store

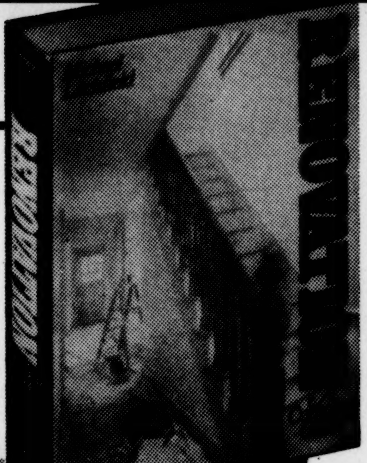


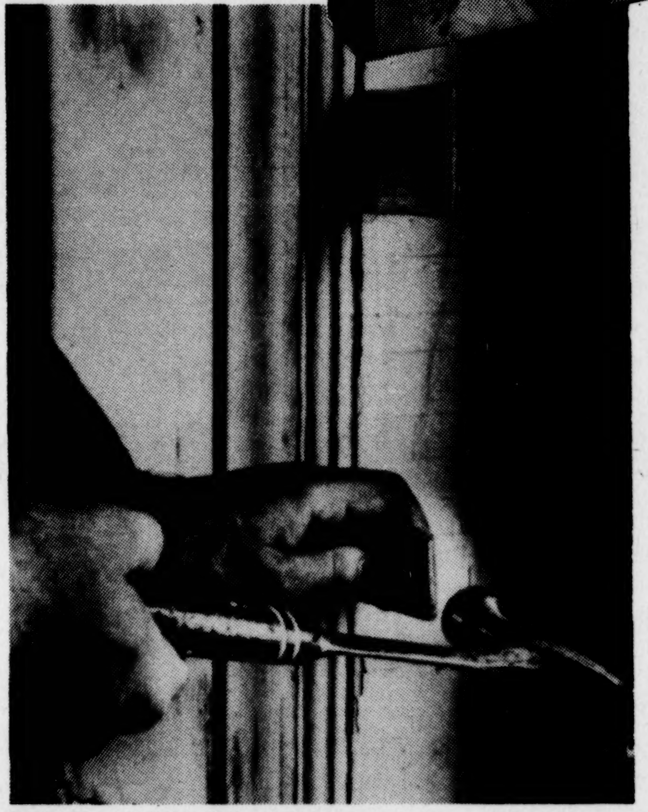
Renovation

If I owned a hardware store or ran the local lumberyard, I'd buy a desk copy of this book for do-it-yourself customers to paw through. The ones who should have done some homework before they walked in can here learn the names of the things they need. Those with questions about the best way to do something will find the explanation of methods well-integrated in text, line illustrations, and photographs. Both groups will return to the sales desk informed and encouraged.

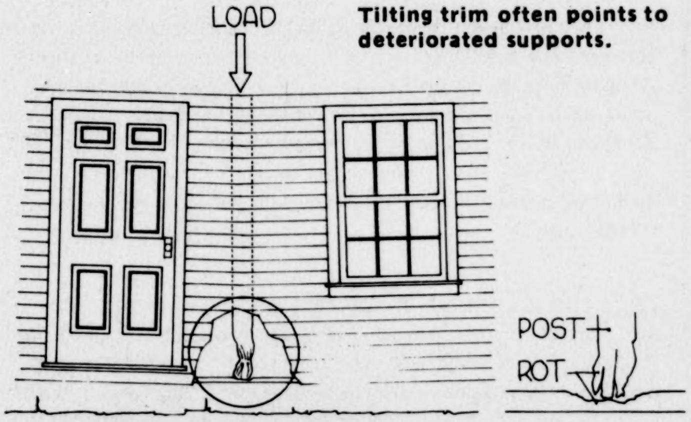
In an age when people write books on subjects they have scarcely mastered, and publishers back them, what makes **Renovation** *shine is experience and teamwork. The illustrator used to be a contractor. The photographer had previously remodeled a loft and wasn't afraid to lug her camera into grungy buildings. The author renovated three houses and had a hand in the beginnings of* **Fine Homebuilding** *magazine (***NWEC** *p. 232). What was supposed to be a year-long project ended up taking four, and several copy editors got burned out along the way, but the result is a book that probably won't have any serious competition for years to come.* —*Richard Nilsen*

Renovation
(A Complete Guide)
Michael Litchfield
1982; 576 pp.
$34.95 postpaid from:
John Wiley and Sons
One Wiley Drive
Somerset, NJ 08873
or Whole Earth
Bookstore





Removing trim without harm


LOAD
POST
ROT

Tilting trim often points to deteriorated supports.

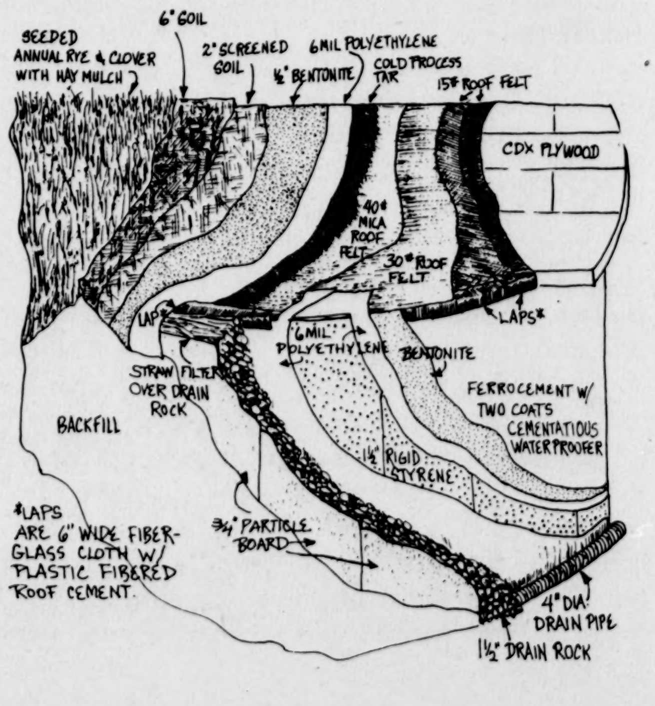
The Earth Sheltered Owner-Built Home

It's beginning to seem like an owner-built book-of-the-month club is upon us. This time, the hardworking Kerns and some friends take us from philosophy to the real test: actually building and living in an earth-sheltered home. As you might expect, great emphasis is placed on taking matters into your own hands. The three structures shown cost as little as an unblievable $3.00 foot^2 to a not-bad-these-days $30.00. Which is to say that it is still reasonable to build your own humble abode in these silly times. They are getting very convincing with the "go thou and do likewise." —*J. Baldwin*

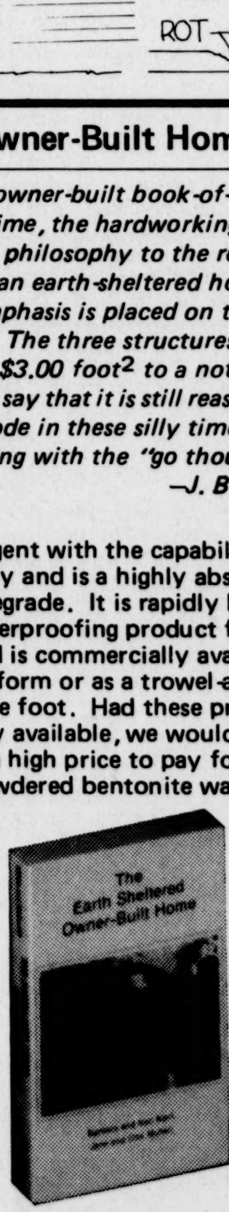
●

Bentonite, a water-proofing agent with the capability of resealing itself, occurs naturally and is a highly absorbent, expansive clay that will not degrade. It is rapidly becoming a popular, dependable waterproofing product for underground construction and is commercially available to the owner-builder in panel form or as a trowel-applied paste at a cost of $1 per square foot. Had these products been less expensive and locally available, we would have bought them. But it seemed a high price to pay for refined clay. We found that powdered bentonite was widely used to seal ponds and was available from suppliers of industrial minerals in 100-pound bags for $120 per ton. Experimentation revealed that, when this form of bentonite was mixed with water and applied to a wall, it dried, cracked, and failed to adhere. But when 6 mil plastic was embedded in a paste of bentonite immediately after its application, the paste stayed moist for at least a week, adhering well to both wall and plastic.

Western pod waterproofing and backfill details as viewed from the north. The drain rock formed a very porous layer that quickly carried any water reaching the building down to the perforated pipe system at the footing. Inexpensive particle board separated the drain rock from the soil backfill.


SEEDED ANNUAL RYE & CLOVER WITH HAY MULCH
6" SOIL
2" SCREENED SOIL
½" BENTONITE
6MIL POLYETHYLENE
COLD PROCESS TAR
15# ROOF FELT
CDX PLYWOOD
40# MICA ROOF FELT
30# ROOF FELT
LAPS*
LAP*
6MIL POLYETHYLENE
BENTONITE
STRAW FILTER OVER DRAIN ROCK
BACKFILL
FERROCEMENT W/ TWO COATS CEMENTATIOUS WATERPROOFER
1½" RIGID STYRENE
*LAPS ARE 6" WIDE FIBER-GLASS CLOTH W/ PLASTIC FIBERED ROOF CEMENT.
¾" PARTICLE BOARD
4" DIA. DRAIN PIPE
1½" DRAIN ROCK

The Earth Sheltered Owner-Built Home
Barbara and Ken Kern
Jane and Otis Mullan
1982; 270 pp.
$10 postpaid from:
Owner-Builder
Publications
Box 817
North Fork, CA 93643
or Whole Earth
Bookstore

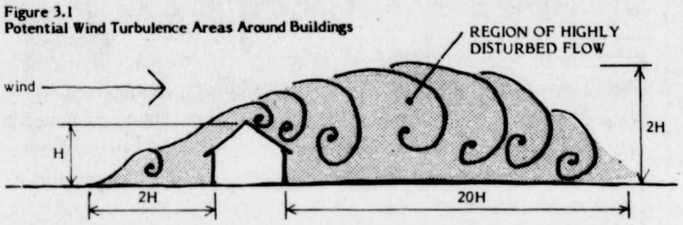


Kansas Wind Energy Handbook

It sure does feel good to see books like this one appearing at last. Its very existence means that a very large body of work has been accomplished — enough to permit a trustworthy rules-of-thumb manual. In turn, the book permits a relatively rapid look at whether you should go further — in this case to erect a wind generator. The information here is cold blooded, hype-free, and specific to Kansas, though the basic principles can obviously be applied elsewhere in the flattish states. It's also easy to use, since no sales pitch or other message is being pushed at the same time. Too bad such handbooks weren't around a few years back when they could have saved the wind business embarrassing credibility gaps. And the price is right!

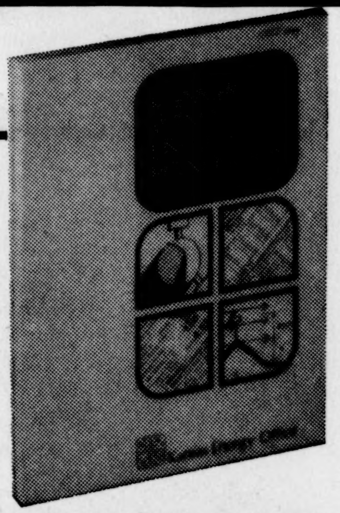
—J. Baldwin

Figure 3.1
Potential Wind Turbulence Areas Around Buildings



Kansas Wind Energy Handbook
John Selfridge, Editor
1981; 97 pp.

free from:
Kansas State Energy
Extension Service
Ward Hall
Kansas State University
Manhattan, KS 66506

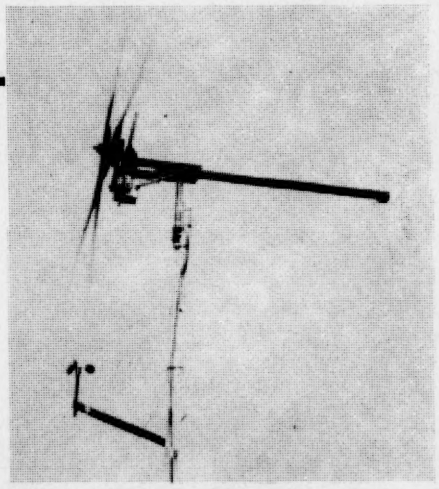


The general rule is very clear — stay as far away from obstructions as possible. However, this rule gives little concrete guidance. How far away is enough? Consider Figure 3.1. If a building has a height "H", then the shaded region indicates the region of highly disturbed wind-flow given the indicated direction of the wind. The disturbed region can extend upward two times the height of the building, twenty times the height of the building downwind, and twice the height of the building upwind. If building obstructions can not be avoided, place the site downwind of the least-common wind-direction, thus assuring a minimum impact.

Dragonfly Wind Electric generator

The wind-machine business has been maturing in the common pattern: of the many starters, only a few well-capitalized sturdy designs remain. Even the lowliest chargers cost around a thousand bucks by the time you get them on line. Do-it-yourself machines have tended to end up twisted on the ground. So what does one do if one craves a modest wind-generated electric system? The Dragonfly is one answer. Its ultra-simple design is fabricated, mostly by you, from commonly available hardware-store parts. Performance isn't bad, considering. Obviously, repairs are not mysterious, and obviously the unsophisticated construction puts more responsibility on the owner than is the case for the fancy rigs. I can't personally vouch for the Dragonfly, but I do admire the idea, and I'm sure it would perform adequately for modest needs. —J. Baldwin

Dragonfly Wind Electric generator
$475 complete
but unassembled
$80—$210 for kits in
various stages
of completion
Catalog
free from:
Dragonfly Wind Electric
P.O. Box 57
Albion, CA 95410



The self-feathering mechanism consists of a horizontal hinge which allows the blade, axle, and alternator to tip back as a unit, spilling high wind over the top. It is held in operating position by its own weight and a stainless steel spring. Dragonfly is guaranteed to survive winds of 60 mph unattended when properly balanced and loaded. Safety requires manual shutdown for higher winds.

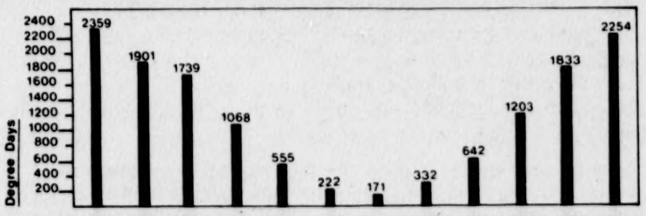
A Solar Design Manual For Alaska

It may seem bizarre to talk about solar in a place where there are days with no sun in winter and days with no night in summer, but . . . even there, attention to solar design detailing can help! This manual isn't complete, really, as there are lots of things to be worked out by Alaskans before there's a Final Word. Nonetheless, Alaskans and other subarctic dwellers can learn a lot from this collection of specialized information. And can add to the next edition too. *—J. Baldwin*

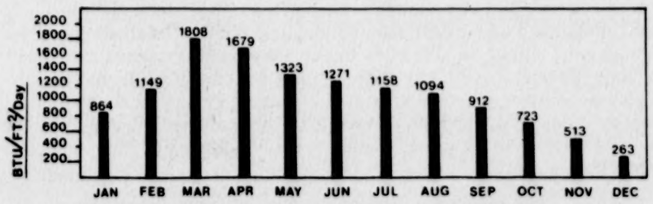
●

One expects the average solar radiation in September to be very nearly equal to that in March. However at Bethel, Matanuska and Fairbanks, the solar radiation in March averages twice as much as that in September, on a vertical south-facing surface. The asymmetry is due to late summer and autumn cloudiness, and predominantly clearer weather during the period from February through May. The result is that solar radiation on a south-facing vertical surface (the most important consideration for passive solar design) is out of phase with heating degree days. Solar gain peaks in March and April, when the solar heat is still very useful. The solar geometry and climate provide an unexpected benefit for passive solar applications in the far North.

These graphs illustrate that the Fairbanks heating degree days (which are an indication of a building's heating requirements) are not in phase with the solar radiation on a south-facing vertical surface. This has positive implications for passive solar heating. The solar gain is highest in March and April when heating is needed.

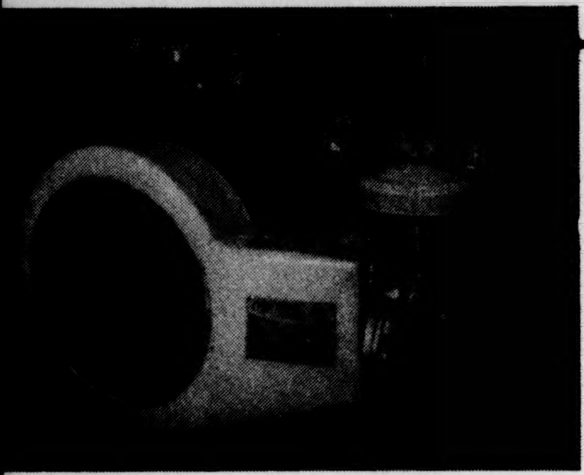


Average Monthly Heating Degree Days
Fairbanks, Alaska



Average Solar Radiation on a Vertical South Facing Surface
Fairbanks, Alaska

A Solar Design Manual for Alaska
Richard D. Seifert
1981; 163 pp.
$13.75 postpaid from:
Editor
Institute of Water Resources
University of Alaska
Fairbanks, AK 99701



Swan 4 HP
Model 170F — $495.

Chinese Diesel Engines
catalog
free from:
CDI Imports
15749 Lyons Valley Rd.
Jamul, CA 92035

Chinese Diesel Engines

Whilst dodging the bullets from Buy Americans, let me extoll the cheap, crude, ultra-basic diesel done as only the Chinese seem to be able to do it. These work well, as anyone who has spent time in mainland China will tell you. They seem to be built with "the right attitude." For instance, each machine comes with a big wooden box containing all the tools and parts necessary for all maintenance — and a complete overhaul! Yeah, rings, valves, the works. The engines also come coupled to various devices such as generators, marine drive gear, or complete tractors. Incidentally, I think Americans, if they cared to, could build such engines both better and cheaper. —J. Baldwin

[Suggested by Joe Kane]

Hand cleaner

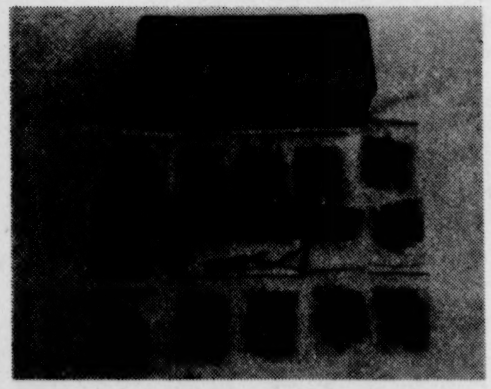
Every now and then we hear a wail: "Get this stuff offa me!" Green enamel in a blonde braid maybe. Bearing grease in a favorite shirt. Polyester coated Golden Lab. You folks that work on cars know what to do, right? Waterless hand cleaner. Rather than the usual gritty skin killer, this stuff is gloppy and smooth. It doesn't eat people. Scoop some out of the squat can and smear it around until the nasty is gone. There are many brands, but you can tell if it's the Right Stuff if it hums in the can. Yup. Give the can a whack and hold it up to your ear. If it hums, you got it. It was originally made for messy printers. —J. Baldwin

Hand cleaner
$2 (approx.)
at your auto parts
or paint store

Alumismiths

This outfit offers Lumiweld, a process whereby you can weld aluminum with no special skills or equipment (other than their kit). Unlike other aluminum-welding methods, this doesn't fatally weaken the surrounding metal. It is claimed that "pot-metal" can also be repaired — not an easy task otherwise. The down-home catalog inspires faith in this stuff as well as the several other unusual items carried. They look like nice folks to work with. —J. Baldwin

[Suggested by Steve King]



Closed-end "Pop" Rivets for Boats. The problem with ordinary rivets is that they can leak because the ends are open. Some aluminum rivets have a steel mandrel (the little piece you pull through and break off) which can cause rust or corrosion. Local stores seldom stock closed-end, all-aluminum "Pop" rivets, so we put together several different kits containing assortments of the most needed water and vapor-tight all-aluminum rivets (including some open-end sizes) to fill this need. We added some choices of large-flange rivets for fastening soft or brittle materials such as wood, plastic and fiber-glass. The riveter tool is heavy duty with interchangeable nosepieces to accomodate all the rivets in the kit. Boat Kit, All Purpose Kit, or Custom Kit — $39.

Alumismiths
catalog **$2**
Lumiweld kits
$15—$25
postpaid from:
Alumismiths
P.O. Box 517
Deland, FL 32720

Successful Passive Solar Design course

Architects educated before solar hit the big time are in a tricky position. As licensed professionals, they are supposed to know it all. The embarrassing number of passive solar buildings that don't work — some from famous offices — are proof that the information needed to design a good solar building is not all that easy to come by. An architect would have to read many tedious books, wade through much controversy, and still have doubts. Now the venerable American Institute of Architects comes to the rescue with a home course in how to do passive solar right. While I'm sure there is some controversy over even this course, it nevertheless appears to be about the only relatively easy way to get the knowledge for confident design. You don't have to be an architect to enroll either. I consider the price to be a bargain for such highly distilled information. —J. Baldwin

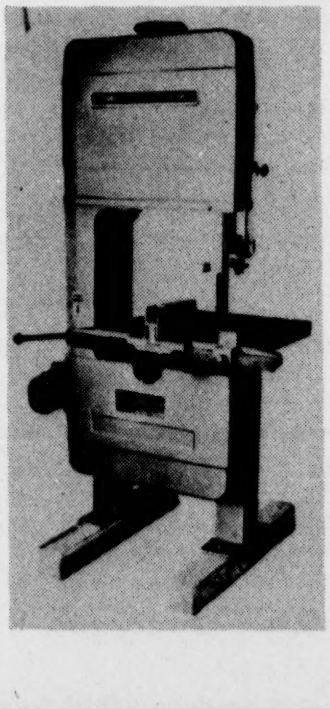
Successful Passive Solar Design
$188.95 postpaid
(15-day free trial)

Information
free from:
Director of Professional
Development Programs
The American
Institute of Architects
1735 New York
Avenue N.W.
Washington DC 20006

Hitachi Resaw

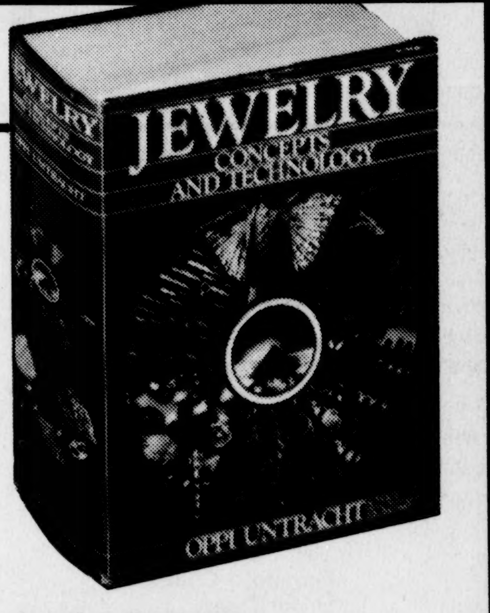
*Resawing — cutting fat lumber into thin lumber — can be a big problem if you don't have the proper equipment, and proper equipment has not been easy to come by recently. Conover (**NWEC** p. 143) now imports this machine. Its 3-inch-wide blade will take up to a 14½" bite from a piece 12½" thick — a job that'd be a real bear without such a machine. The cost is above home-shop, but is very reasonable as this sort of thing goes.* —J. Baldwin

Hitachi Resaw
$1885 postpaid
catalog
$1
both from:
Conover Woodcraft
Specialities
18125 Madison Road
Parkman, OH 44080

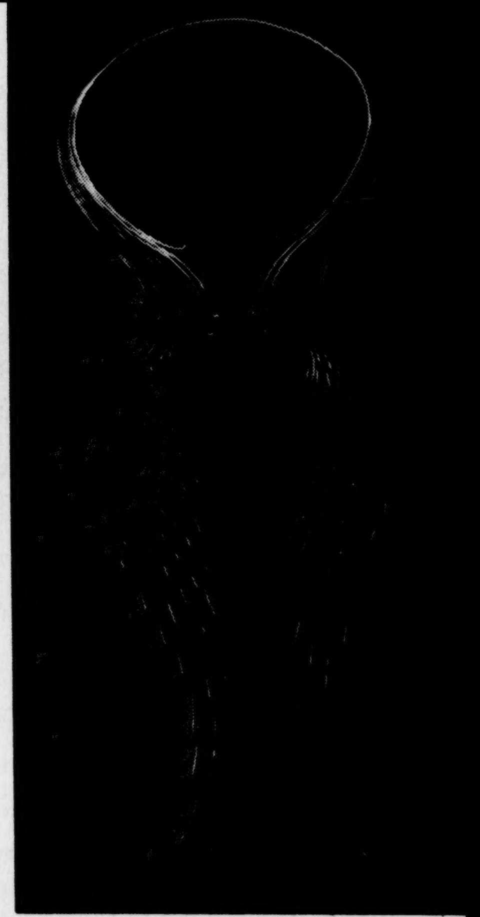


Jewelry Concepts and Technology

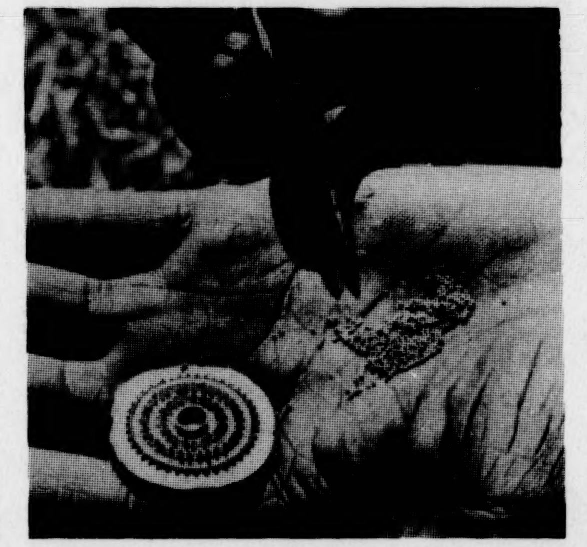
"My stars!" is what my grandmother would say when confronted with the need for superlatives but unable to think of any that would fit. That's what she'd say about this work. Total, comprehensive, magnificent, fascinating — your choice. Mr. Untracht's previous book was no wimpy fun-with-jewelry bit either: **Metal Techniques For Craftsmen** (**NWEC** *p. 260) seemed at the time to be unsurpassable. But it has been surpassed. Quite literally, he's looked at every style, technique, form, and material (even plastic) used in jewelrymaking in just about every culture, past and present, you might care to name. History, symbolic meaning (something most jewelers seem to ignore), heretofore secret methods are all shown in minute detail along with tables of metal characteristics. There's seemingly no end to it, and it's all presented in a way that makes it hard to quit reading even when your thing isn't jewelry. In short, the book itself is a work of art. And obviously a work of love as well. Reading along I've also been struck by how few of us moderns really get* ***into*** *something, in depth, all the way. I'm amazed that one person could know all this. Physically, the book is well done too. Everything illustrated and diagrammed. All it lacks is wheels and a towbar to haul its massive bulk around.* —J. Baldwin



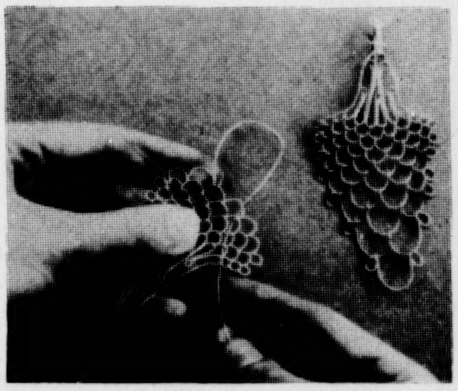
Jewelry Concepts and Technology
Oppi Untracht
1982; 840 pp.
$60 postpaid from:
Doubleday and Company
501 Franklin Avenue
Garden City, NY 11530
or Whole Earth Bookstore



Mary Lee Hu, U.S.A. "Neckpiece No. 18." Made of fine and sterling silver, fine gold, and gold-filled brass wire. The lower winglike portion is made of 22 gauge B.&S. gold-filled brass wire using single-element open twining to one side.



Mary Lee Hu demonstrates single-element, open one-side twining to create an earring. Each row of 22 gauge B.&S. fine silver wire starts with a separate length whose end is brought forward, placed in the loop of the previous row, and pulled until the loop that forms is the desired size and shape. Round nosed pliers may be used instead of fingers. The effectiveness of this system depends on precision in loop size and shape. Photo: Mary Lee Hu.



DHARAN CANTONEMENT, NEPAL. Nepalese jeweler preparing a nose ring (nakh phuli) in 22 K gold for granulation fusion welding. The nose ring ground was hammered out of a gold coin, and its surplus outside the pattern will be removed after granulation. The granules are being selected and placed with tweezers on the gummed surface. Small granule groups in three-ball arrangements, stamped pyramid shapes, and the central bezel are all fused to the base at the same time. Photo: Oppi.

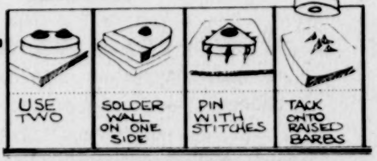
The Complete Metalsmith

Let's say you're a jewelrymaker and you can't figure out a way to make a hidden hinge for a box. So you write your uncle, the master goldsmith. He sits down, gets very stoned, and sends you a beautifully descriptive letter, complete with imaginative little drawings, written in a tight, clear hand. Now imagine a whole book on jewelrymaking done in this very personal, friendly, and accessible way, and you have **The Complete Metalsmith.** *The title to the contrary, this book won't tell you much about blacksmithing, titanium, or stainless steel, but it will tell you a* ***lot*** *about goldsmithing, and in a marvelous way. Tim McCreight's style is light and humorous, as well as technically knowledgeable. The book is visually and factually stimulating enough that I reread it a second time as soon as I finished it once, to try and take more of it in. The illustrations are clear, to the point, and homey. The quotes by everyone from Voltaire to W.C. Fields add a bit of far-flung perspective. And I appreciate the safety alert symbols scattered throughout, used when describing a tool or technique that has a hazard potential. A gem of a handmade book.* —David Clarkson

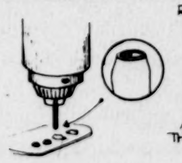
The Complete Metalsmith
Tim McCreight
1982; 150 pp.
$9.95 postpaid from:
Davis Publications
50 Portland Street
Worcester, MA 01608
or Whole Earth Bookstore

THE COMPLETE METALSMITH
AN ILLUSTRATED HANDBOOK

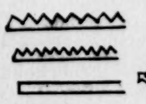
PLAN RIVETS SO AS TO PREVENT PIECES FROM ROTATING:



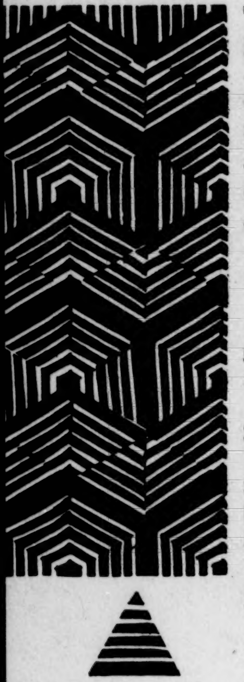
TO ALLOW MOVEMENT,
WHEN A RIVETED PIECE IS TO SWING SIDE-TO-SIDE:
ADD A THIN PIECE OF CARDBOARD TO THE ASSEMBLY AND RIVET AS USUAL. REMOVE THE CARDBOARD BY BURNING OR SOAKING IN WATER TO PROVIDE CLEARANCE.



RIVET HEADS CAN BE SHAPED AND BURNISHED BY A BEADING TOOL SET INTO A DRILL PRESS. TOOLS MAY OF COURSE BE MADE FOR ANY SIZE HEAD THAT IS NEEDED.



A POLISHED APPEARANCE IS THE RESULT OF A PERFECTLY FLAT SURFACE. THE CROSS SECTION OF SCRATCHES UNDER MAGNIFICATION LOOKS LIKE THIS. LIGHT IS REFLECTED AROUND THE SCRATCHES LIKE SOUND BEING ECHOED IN A MOUNTAIN VALLEY. THE FAILURE OF LIGHT TO REFLECT DIRECTLY BACK PRODUCES A DULL OR MAT LOOK.



Stamp It!

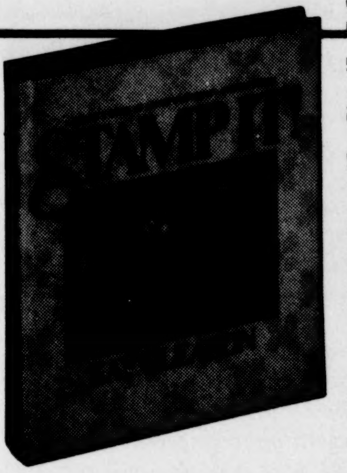
What can you do with a razor blade and a pencil eraser? **Stamp It!** *shows you how to make wrapping paper, stationery, T-shirts, covered boxes, bathroom tiles, and dozens of other things using found materials and inexpensive tools. Not your usual craft book, it's full of inspiration and design ideas for anyone interested in the decorative arts.* *—Miranda Hapgood*

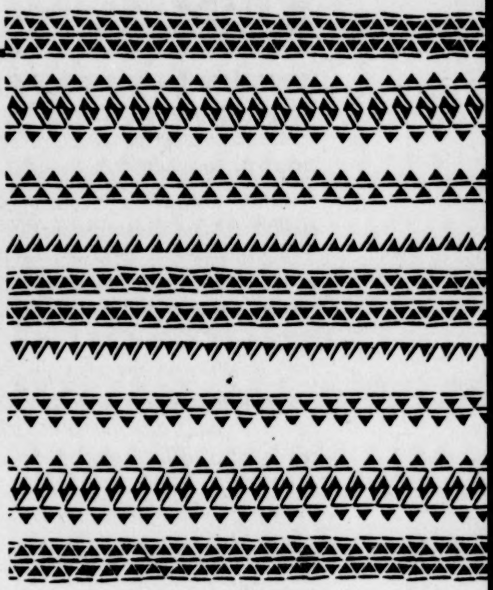
The simplicity of the basic stamp designs and the ingenuity used to build them into appealing patterns raises this book from kitsch to craft. *—Kathleen O'Neill*

Stamp It!
(A Project Book of
Stamp Pad Prints and
Patterns)
Kay Gleason
1981; 128 pp.
$17.81 postpaid from:

Van Nostrand
Reinhold Company
Order Dept.
7625 Empire Drive
Florence, KY 41042
or Whole Earth
Book Store

A vinyl eraser, cut into an equilateral triangle, was carved with stripes in order to print this pattern in a combination of two-and four-step rotation.





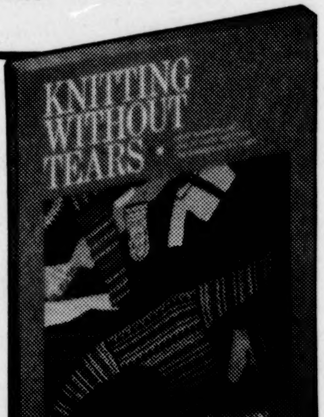
A pattern of stripes printed with a small triangular piece of eraser. The shallow, narrow line was cut from the eraser surface with a very sharp single-edged razor blade. The stamp was then turned in different directions to vary the patterns in the rows of prints.

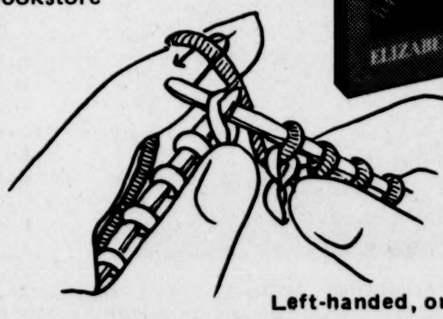
Knitting Without Tears

As a passionate knitter, I'm beginning to resent the craft's present stepchild status, particularly compared to weaving. My bookstore doesn't even have a "Knitting" shelf label; weaving has an entire shelf to itself. Since looms are expensive, immobile and productive in seven cases out of ten only of arty shawls and table runners (so shoot me), I am beginning to conclude that elitism and fantasy are responsible for weaving's dominance. Remembering Ghandi's spinning wheels, I have my own fantasy of an underground movement: across the country men and women discover a soothing skill which is inexpensive, portable and, while capable of producing beautiful, useful, warm garments at its most basic level, still lends itself to great intricacy of color, texture and design. I'm certain that such a movement's patron saint would be Elizabeth Zimmermann, and its gospel the miserably titled **Knitting Without Tears.**

Zimmermann has written three books and publishes a biannual newsletter, but these are the frosting on the **KWT** *cake. Although she'll usually provide exact instructions for what she elsewhere refers to as The Blind Follower, her real passion is for making the logic and techniques of knitting clear enough to free her readers to knit what they want. From Grand Visions (circular knitting is her great love) to tiny details (Afterthought Pockets, One Row Buttonholes), she's always thinking, both giving her readers the benefits of her thoughts and encouraging them to experiment on their own. She's also the only knitting writer funny enough to read for the pleasure of it.*
—Susan Blackwell Ramsey

Knitting
Without Tears
Elizabeth Zimmermann
1971; 119 pp.
$10.20 postpaid from:
Charles Scribner's Sons
Special Sales Dept.
597 Fifth Avenue
New York, NY 10017
or Whole Earth
Bookstore





Left-handed, or German knitting

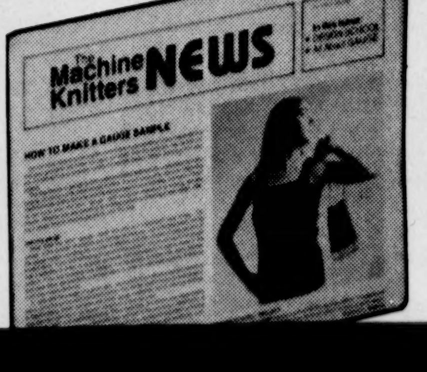
●

There are two great advantages to seamless sweaters. First, and most important, they are comfortable, as they will stretch in all directions. You can take your arm out of the sleeve, elbow first, without any ominous sounds of popping threads. Secondly, having no seams, they demand no sewing skills at all. After you have made your first one you will possibly discover another advantage; that of mindless manual activity, which, with a little practice, will leave your eyes free to read, observe the landscape, or glue themselves to the tiny screen.

Machine Knitters News

A new publication for those who own knitting machines. The first issue came out in June 1982 and it looks good. The **News** *has included articles on buying a knitting machine and design for machine knitting as well as sources for supplies and classified ads. Useful information for both beginning and advanced knitters.* *—Marilyn Green*

Machine Knitters
News
Gail Selfridge, Editor
$15/year (12 issues) from:
LRH Enterprises
1509 Houston Street
Manhattan, KS 66502



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Among the discoveries that persons often make *after* they have purchased a machine, is the lack of conventional patterns geared to machines. I receive more letters wanting to know, "Where are the patterns?", than on any other subject. The truth of the matter is that *if you want to get the most from your machine you must learn to work from formulas.*

Most hand knitters are unaccustomed to working from formulas. Instead, they spend time (often more than would be required to draft their own patterns) searching for patterns, and eventually they find conventional patterns that at least approximate what they want. The *searching* technique simply doesn't work for machine knitting because you cannot find a great many patterns if, in fact, they do not exist.

Gift Giving Guide

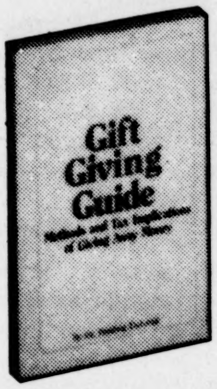
For creative philanthropists this is the technical book of choice. Booklet, actually, since it's a brisk 64 pages. It's prepared by a working collection of innovative funders, The Funding Exchange (Vanguard, North Star, Mackenzie River Gathering, Liberty Hill, Haymarket, Bread & Roses Community Fund). Handy, encouraging service.

—Stewart Brand
[Suggested by Bruce McConnell]

I've heard it said, "They donate to charity for the tax advantage." Such a statement is nonsense. You can lose money in business and get the same tax advantage. A charitable donation is an expenditure that is deductible from your gross income before your taxable income is figured. No big deal. But there are some limitations and important details you should know if you are giving money to charity and you are concerned about the beneficial effects on your taxes.

Get the 1983 Edition; the reader won't feel secure with the '82 changes even though the effect was nil on charitable giving. *—Michael Phillips*

Gift Giving Guide
(Methods and Tax
Implications of Giving
Away Money)
The Funding Exchange
1981, 1983; 64 pp.
$7.15 postpaid from:
Funding Exchange
80 Fifth Avenue,
Room 1204
New York, NY 10011



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Can I avoid the tax on capital gains through charitable giving?

Yes. For most charitable gifts made with appreciated property, *none* of that appreciation or capital gain will be subjected to tax. There are two clear exceptions to this general rule. If the property was held twelve months or less (that is, if the gain is short-term), no special treatment is available and the giver is subject to regular income tax. In other words, this tax break only applies to gifts of property held for more than a year.

The other exception is in gifts to *private foundations.* Here, only part of the tax on long-term gains is overlooked when a charitable gift is made. (See "Public Charity vs. Private Foundation," page 24.)

Since most of your gifts of appreciated property will involve long-term gains and will be made to *public charities*, these two exceptions don't usually apply. That's why, as a rule of thumb, you should make your charitable donations with appreciated property whenever possible to take advantage of this *double benefit*: avoiding taxes on capital gains and getting your regular charitable deduction for the full value of the gift.

Tithing successfully (when you don't have much to tithe)

This is a memo on "giving for the cheapskate." And I admit it, I am a cheapskate. I think one should give the traditional tenth of their income to their religion. Or perhaps I should say, "To something you believe in." I give nothing from my regular teaching salary.

On the other hand, after finishing the writing of a recent book, I thought to myself, "Why not pledge five percent of my royalties for some worthy cause?" Secretly I thought the gods might look more favorably on helping the book sell.

And indeed, it did sell pretty well. Of course selling "pretty well" does not (as all writers know) guarantee a big royalty check. Mine was about $3000, meaning that my meager "half-tithing" was $150. I feel embarrassed to admit how stingy I am.

Confronted with the problem of how to dispose of this sum, my first thought was to give it to either a local environmental group (I suppose you might call this my "religion") or a national group that lobbied in Washington. Someone suggested that Friends of the Earth met both criteria since they had recently established a local affiliate in the area (who, by the way, would get a cut of the donation).

Thus, *who* to give it to was solved, but now *how* to give it?

I decided the best way was to subsidize ten low-income memberships (cost: $15/member). All would be either friends or relatives who fit the following description:

- They were interested in environmental issues (but didn't belong to FOE);
- They had some influence in the community (included are teachers, a businessman, a minister, and a local farmer);
- They might become members (workers?) on their own after the gift membership ran out. In each case, I called the person and told them what I was doing and mentioned I hoped they would continue their membership.

Of course, FOE is but one of many groups you could give to in this manner. By the way, I did feel pretty good about my commitment. I remember a certain feeling as I licked the envelopes and walked to the post office . . . a little like planting a tree.

Jim Eggert
Colfax, Wisconsin

Shelter What You Make — Minimize the Take

In the '60s the Tax Reform Act of 1969 affected nonprofits heavily; in the '70s (1976) taxes were also redesigned. In the '80s we've had major tax revision in both 1981 and 1982 (humorously called the Lawyers and Accountants Relief Acts). Today by my estimate a person with both net marketable assets of $500,000 and assets that are ten times their gross annual salary would not pay federal income tax. They would only be subject to the "alternative minimum tax" (Amtax).

These rapid and major tax changes create a need for very good do-it-yourself books. The first one is **Shelter What You Make.** *It is a first-rate explanation of tax shelters and how they work. There is very little mystery about tax shelters. They require you to have a good net worth to be effective, and many are good protection from taxes but high risk. The book has many good stories as examples. The new Reston edition includes the 1982 Tax Act, with its new tax shelters. You can now buy churches, museums, and public library buildings to reduce your taxes.* *—Michael Phillips*

Shelter What You Make — Minimize the Take
(Tax Shelters for
Financial Planning)
Beverly Tanner,
Marvin Pheffer, and
Alex Laurins
1982, 1983 2nd Edition;
263 pp.
$14.95 postpaid from:
Reston Publishing Co.
P.O. Box 500
Englewood Cliffs, NJ 07632
(Available June, 1983)

•

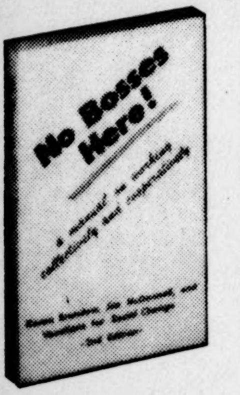
A partnership is not considered an entity for tax purposes; therefore, it is not taxed directly. Rather, any gain the partnership makes on an investment (including capital gains) is passed directly on to the individual partners. The partners, therefore, pay taxes only once — when they receive their profit.

No Bosses Here!

The "collective" is a management concept that grew up in the 1970s. I have worked with several dozen "collectively" run businesses and the concept is very workable and important. The "collective" represents the homegrown American version of Japanese management — long-haired consensus. It can be effective and the skills needed to make it work are being learned in our generation.

This book covers all the elements of structure and process necessary to get a healthy collective started and running for the first five years. The authors are honest about the major problems that they can't adequately advise on: firing, salaries, and separating daily managerial structure from consensus decision-making. The latter three problems grow more serious as the "collective" ages. As the experience is gained, we all need to share it.

—Michael Phillips



No Bosses Here!
(A Manual on Working Collectively and Cooperatively)
Karen Brandow and Jim McDonnell
1981; 103 pp.

$4.95 postpaid from:
Alyson Publications
P.O. Box 2783
Boston, MA 02208

●

In reality, there is no such thing as a structureless group. Every group of people will structure itself somehow. It may not be planned or formal, but there is a structure. When it isn't out in the open, only a few people make or know the rules. They end up with more power. So really, we can't decide whether to have a structured or structureless collective — only whether or not to have a formally structured one.

Quill Office Supplies

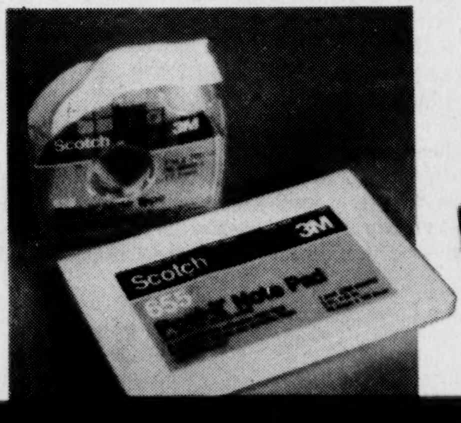
For over ten years I have been purchasing office supplies at discount prices by mail order from this company. Unlike many mail order outfits who offer price leader items at discounts and hit you up for regular items, Quill seems to be consistently lower priced on just about everything they carry. Overall, the savings for even a small office can be substantial in a year's time. Their service has always been fast — usually received within a week to 10 days of order placement — and the quality of the supplies has always been first class. *—Milton Sandy, Jr.*

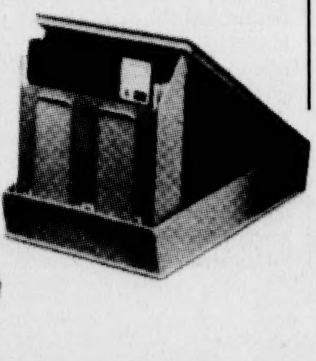
Two items in this catalog are especially worth mentioning since they've taken over our office. 3M's Post-It pads are now the medium of choice for nearly all our messages — phone messages, editorial comments and routing on manuscripts, announcements, etc. They easily stick on anything, easily unstick, and leave nothing behind. On our paste-up flats we use the white Post-It for all corrections, masking, etc. Handy stuff. *—Stewart Brand*

Quill Office Supplies
Catalog
free from:

Quill Corporation
100 S. Schelter Road
Lincolnshire, IL 60069

3M Post-It tape and notepads. The tape sticks flat for temporary corrections but easily pulls off original. White. $1.49 each, $16.94 per dozen. The notepads look like ordinary note pads, but can be applied and re-applied without leaving a mark! Canary color. 3"x5", $10.99 per dozen.



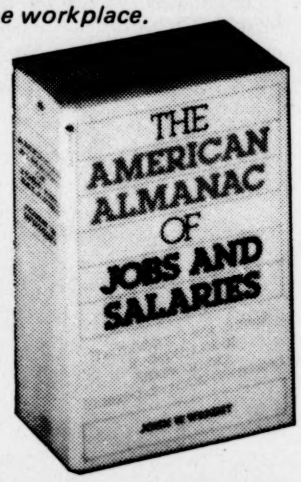


Attractive beige plastic "book-style" cases have convenient "pop-up" feature that brings disks to a vertical position for easy access. Sturdy polypropylene, protects up to 10 disks against dust and dirt which can affect the reliability of recorded data. Ideal for long-term storage or shipping of disks. For 5¼" mini-disks, $2.64 each.

The American Almanac of Jobs and Salaries

An amazingly complete and comprehensive survey of what people do for work in America and what they get paid for it. It's all here, from television stars to bus drivers and librarians, often broken down by state or area of the country. The discussions of the way salaries are set in different occupations are insightful and accurate. There are some interesting facts here, like the salaries of the top executives of the 100 largest companies in America (want to know how much the chairman of G.M. makes?). Likewise for government officials and their staffs, heads of charities, universities and union bosses. Useful if you want to find out what is ahead of you in your job, if you are surveying different professions, or if you just want to learn something about the social fabric as it applies to power, prestige, and money in the workplace.

—Bruce E. Coughran



The American Almanac of Jobs and Salaries
John W. Wright
1982; 789 pp.

$10.20 postpaid from:
Avon Books
959 Eighth Avenue
New York, NY 10019
or Whole Earth Bookstore

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Policemen usually argue that because they constantly deal with life-and-death situations they are entitled to higher pay than other public employees, and most people accept that premise. But why then do prison guards almost always earn significantly less than police in the same geographic area? More than one-half of all guards work for state-run facilities where average salaries range from $9,500 to $15,000 a year.

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Salaries and Bonuses of Top Book Publishing Executives

Harcourt Brace Jovanovich	
Chairman and President	$354,167
Executive Vice-President	185,000
Executive Vice-President	160,000
Executive Vice-President	140,000
Senior Vice-President	120,000
Harper and Row	
Chariman and CEO	$178,301
President and COO	153,301
Senior Vice-President	95,401
Vice-President, Comptroller	95,006
General Counsel	94,001

●

According to divorce lawyer Michael Minton, the dollar figure value of a housewife's work is $40,823, to be precise. He breaks down the job into different categories and number of hours performed weekly and multiplies by the going rate. Some of the categories: food buyer, nurse, tutor, waitress, seamstress, laundress, chauffeur, gardener, nanny, cleaning woman, errand runner, interior decorator, bookkeeper-budget manager, child psychologist, and public relations woman-hostess. On a more official level, a 1977 study by the Department of Health, Education, and Welfare estimated that the Gross National Product would be 25 to 40 percent higher if household work were included as part of the national output.

Street Smart

If you use cities, you'll use this book. It is the personal antidote for street punk crime, and it shows the opening steps for community antidote. The personal antidote is alertness, knowledge of what to be alert for, and some self-protective tricks that work. The community antidote is: You already outnumber the punks; gang up on them.

A number of books promise that, but this one delivers. It is chock with specifics, quite realistic, even realistically photographed, and real street savvy. The book is by the founder of the Guardian Angels and its founding attorney, but it's not about them at all. It uses their abundance of experience to make you a permanent non-victim.

A quick and easy read. No way to behave the same once you've read it. Good job. *—Stewart Brand*

Street Smart
(The Guardian Angel
Guide to Safe Living)
Curtis Sliwa and
Murray Schwartz
1982; 178 pp.
$5.95 postpaid from:
Addison-Wesley
Publishing Co.
Jacob Way
Reading, MA 01867
or Whole Earth
Bookstore

STREETSMART

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[For the elderly]:
When you leave home, carry a cane, even if you don't need it. Use it as a prop. Select a cane that you can manipulate easily. Walk in groups of three, four, or five. Just visualize the effect on the street tough when he sees four of you walk toward him walking with canes gripped firmly in your hands. This will be a sight he has never seen before. Soon the word will get out. He will understand you are not easy pickings. In groups of three, four, or five, you will give the impression of so much resistance that he will pass you by.

Hold the cane in its normal position in your strongest hand. Do not raise it up. If a hoodlum moves at you and you have a cane, you can strike at his ankles with it, or any part of his body below the knee. Do not raise the cane above the knee, because he can grab it away from you.

If your group encounters a gang of punks who act threateningly, remain together. Shout for help and use all available possessions to act as shields — canes, purses, bags, etc.

•

If you observe a stranger in your neighborhood, approach him and ask what he is doing. Do it politely, but consider his response carefully. Tell him you will walk with him to his destination or show him the way. Watch his reaction. If you're in doubt, notify your neighbors and the police.

If we come to each other's aid, we can take back our city streets.

•

If you want to be streetsmart, then the answer is to learn that if someone is victimized in your presence, then you yourself are injured if you walk away without assisting. The only answer is for us to gang up on criminals as they have on us. The only answer is for us to solve our problems together, because it affects all of us who live or earn our living in the cities throughout America. This sickness that afflicts every city across our country can only be cured by changing our attitude, not our locks.

•

If you are sitting on the train and a group of street toughs are standing, even though seats are available for them, making noise, gesturing, and harassing other passengers, simply stand up and walk toward the closest exit. If matters then get out of hand, you are in a position to shout and scream and attempt to arouse other passengers to assist the victims. If that fails, you are in a position to exit at the next station and call for assistance. Also, you are now standing, and not in a sitting position, which places you at a disadvantage. It also permits you to leave the train at the next station and immediately report the incident to the change-booth attendant, who can then telephone the police. The police will be waiting at one of the next stations.

•

Guns only create a false sense of security. The person who goes to the trouble of getting a gun license should be the one who speaks up and persuades his neighbors to get together and rid the community of crime — thus eliminating the need for a gun in the first place. Instead, he remains silent, hiding behind what he believes is the security of his own gun. Acting alone, he solves nothing. He cares only about himself and is really out of touch with reality.

•

The problem with the typical alarm system is that when it is triggered, it creates an alarm in the apartment that is being vandalized. Most times no one is home to hear it, and those who do will pay no attention. Most burglars known how to disconnect the system. . . . What we suggest is that a mechanism be installed that would trigger some kind of alarm, whether by sound or lights, in the apartments of those of your neighbors who are willing to participate in such a system. Not all have to join with you, only enough to produce the desired effect. . . .

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The Sierra Design of urban elegance — canes, walking sticks, bumbershoots, parasols, and umbrellas for men and women. Reportedly good quality, service, and repairs. They guarantee their folding umbrellas forever.
—Art Kleiner

Uncle Sam
Umbrella Shop
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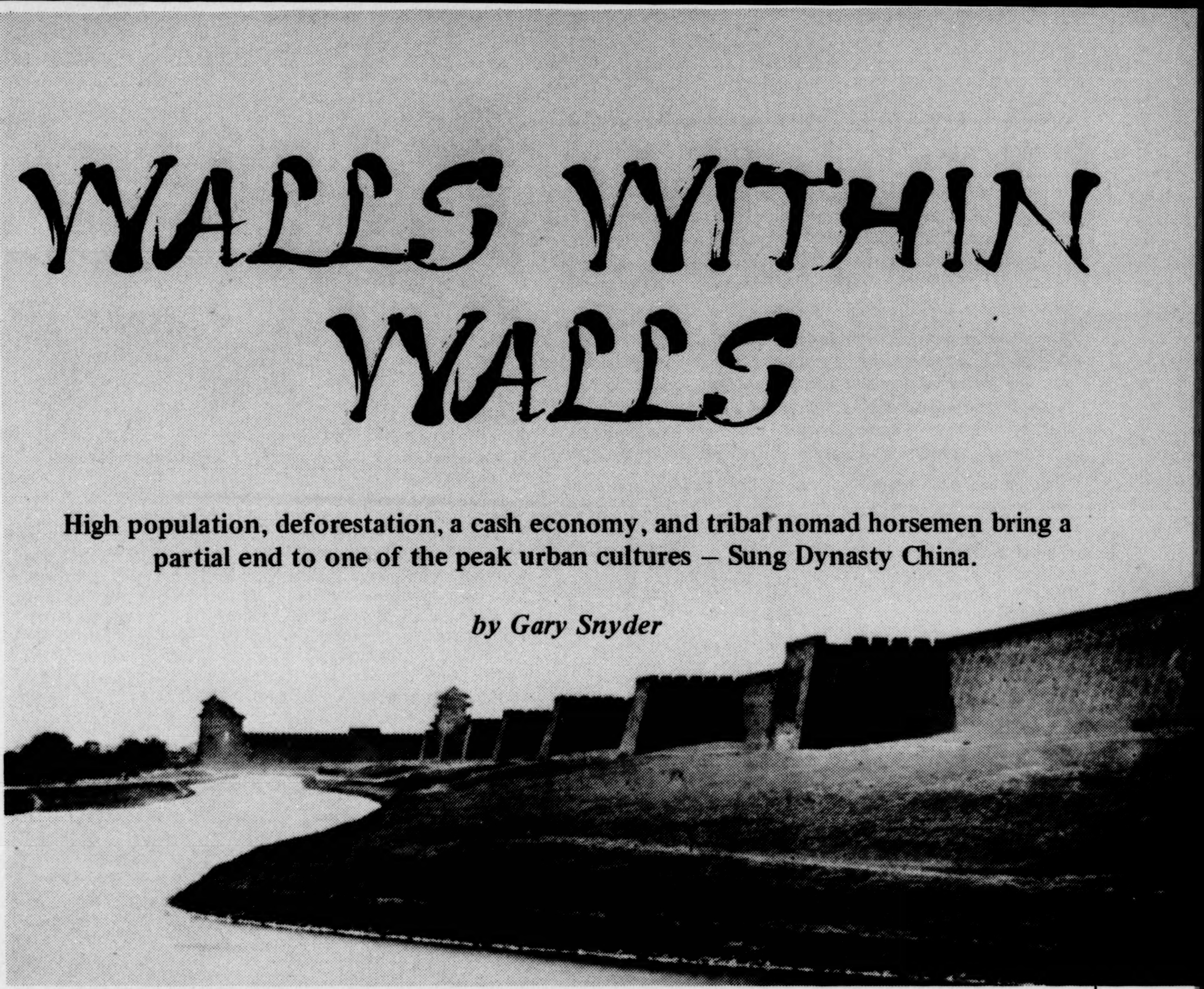
free from:
Uncle Sam Umbrella Shop
161 West 57th Street
New York, NY 10019

The Overnighter — 21½" nylon umbrella — will fit into your suitcase. Available in black, navy, red, beige, brown, white. $6.00.

WALLS WITHIN WALLS



High population, deforestation, a cash economy, and tribal nomad horsemen bring a partial end to one of the peak urban cultures – Sung Dynasty China.

by Gary Snyder

CITY WALLS

DWELLING WITHIN WALLS within walls was normal for the Chinese people of the planes and valleys. In the Former Han dynasty there were an estimated 37,844 walled settlements of various sizes, with perhaps 60 million people living behind them. [1] Walls are a striking part of the Chinese landscape even today, the gently slanted stone walls of a provincial capital, broken by occasional towers that project two or three stories higher yet, rising through the mist fronting a river or lake, or mirrored in half-flooded fields.

The early Neolithic settlements of the Yang-shao type had no walls. Instead they were surrounded by ditches or moats about 15 feet wide and deep. These were probably to keep out animals; deer are notorious nibblers on orchards and vegetable gardens. Digs of Yang-shao settlements have turned up few, if any, fighting weapons. Lung-shan type settlements of the later Neolithic have tamped-earth fortifications and weapons.[2]

Around the fifth century B.C., as the Eastern Chou dynasty slipped toward the era of "Warring States," the basic type of walled city began to take shape.

> The type consisted of at least three contrasting spatial units: a small enclosure which was the aristocratic and administrative centre, mixed (in early times) with dependent tradesmen and artisans; industrial and commercial quarters, with residences, in a large enclosure; farmlands immediately beyond the city walls. In the warring states period sometimes three successive ramparts were built, suggesting a need to extend protection to increasingly large areas of commercial activity. Another change lay in the strengthening of the outer walls at the expense of the

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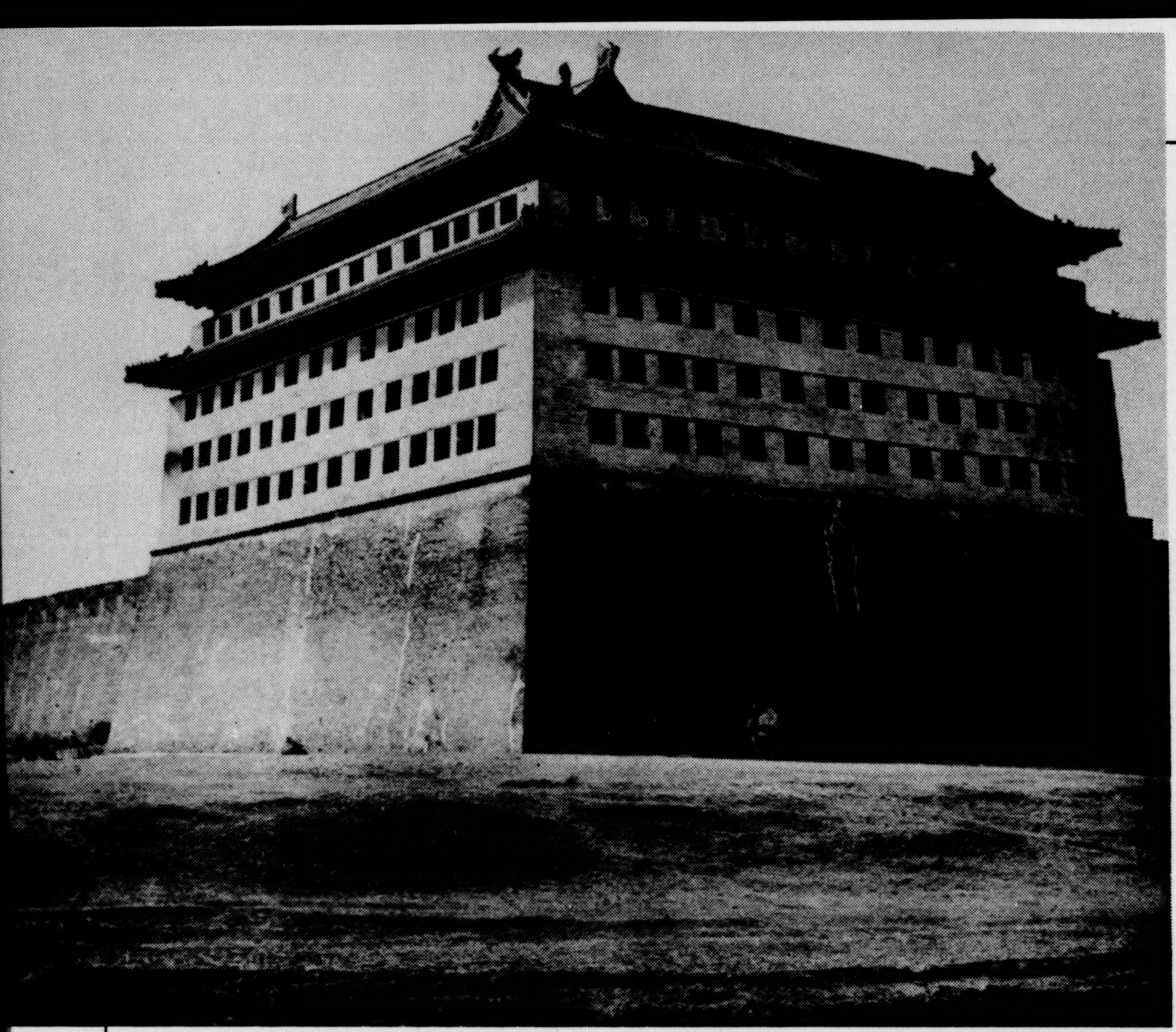
This kaleidoscope of views of "the best society one could hope to see in a world of high population and dwindling resources" reminds me of another walled-city story – Camelot. During the European Dark Ages the Chinese were already coping, sometimes successfully and sometimes not, with overcrowding, waste problems, a speculative economy, industrial development, a population distancing itself from nature, and an increasingly bureaucratic middle class. As people brought their walls inside themselves, they made themselves and their society more vulnerable. Poet Gary Snyder (author, among many other books, of ***The Real Work****, NWEC p. 47) will have a new book of poems out this fall from North Point Press. "Walls Within Walls" is part of a work in progress on nature and China. Annette LaBette, a student of Chinese when she's not proofreading here, did most of the surprisingly difficult picture research for this article.*

–Art Kleiner



Peking's outer wall, 1860. Though it was a historical architectural monument, the wall was cumbersome to modern Peking. It was torn down in the 1950s to allow a freer flow of traffic into the capital (you can imagine the traffic jams through the relatively few gateways) and to make room for more housing.

PHOTO BY FELICE A. BEATO IN THE FACE OF CHINA BY GOODRICH & CAMERON (1978)

> walls of the inner citadel, which were allowed to go into decay.[3]

The city of Hsia-tu, in the state of Yen, is estimated to have been ten square miles within the walls.

There were also the "great walls" to keep out the northern nomad tribesmen, the walls originally built by the states of Ch'in, Yen, and Chao. When Ch'in became the first all-China empire, 221 B.C., it joined together previous sections to make a more continuous barrier.

> The dominant element of the Han dynasty townscape was the wall. It separated a settlement from the outlying fields, and by creating an enclosure facilitated the regimentation of life within . . . it had the character of a succession of walled-in rectangles. There was the town wall with gates on the four sides. Within the wall the settlement was partitioned into a number of wards . . . Ch'ang-an itself had as many as 160 wards. Streets separated the wards, which were in turn surrounded by walls. Each ward had only one gate opening to the street during Han times, and contained up to one hundred households, each of which was again surrounded by a wall. The inhabitants, to get out of town, would thus have to pass through three sets of gates: that of their house, that of their ward, and that of their town. Moreover, all the gates were guarded and closed up at night.[4]

Climbing over these walls after dark is a staple in Chinese storytelling: lovers, criminals, and spies.

T'ang dynasty cities had a little more night life than those of the Han, and larger, looser markets, with special quarters for the Persian, Turkish, and Arab traders. The plan of the capital city of Ch'ang-an followed in good part the old ritual ideal – "The Polar star and the celestial meredian writ small became the royal palace and the main north-south streets through the city."[5] The north-south streets were 450 feet wide. The upper classes were in the eastern sector and the working people in the west. Each wing had its own market area. There were also vacant lots with vegetable gardens and pasture within the walls. The great city was spacious and open.

Such city planning seemed to work, but no one could have foreseen the relentless (if fluctuating) rise of population, especially after the year 1100, when the number first exceeded 100 million. Part of the later rise reflects an increase in the size of the Chinese territory and the inclusion of people considered non-Chinese in earlier times. After 1100 there were five urban centers with over a million people each south of the Huai river.

FLYING MONEY

Between the ninth and the thirteenth centuries China became what it basically was to be into modern times. During the three centuries of the Sung dynasty not only people but wealth and high culture moved south and in towards towns. In the early twelfth century only six percent of the population was urban, but by the fourteenth an estimated 33 percent were living in or around large cities.[6]

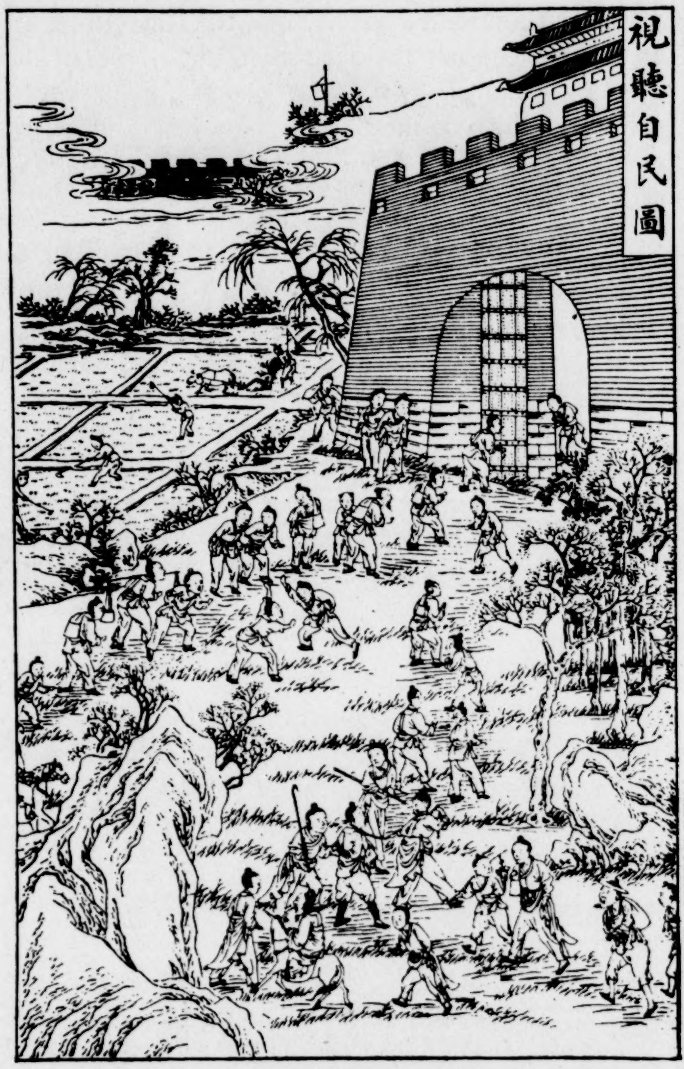
In the second phase of the T'ang dynasty, after An Lu-shan's rebellion, the tax base was changed from per capita to a straight land tax. This meant that wealthy manors which had long been exempt began to pay taxes. It was the first of a series of shifts or tendencies with profound effects. Some of the changes were:

- from a peoples' corvée army to an army of mercenaries
- manor-owning country gentlemen often became absentee landlords
- cumbersome metal coin was replaced by paper money
- from a rustic naïveté to a street-wise hedonism
- from an interest in cultural diversity to a China-centered cultural chauvinism
- from regional agricultural self-sufficiency to cash-crop specialization
- from status determined by family connections to a greater emphasis on status derived from high ranks in the government examinations
- from hiking through the mountains to tending an artifically wild-looking backyard garden.

The society that began to emerge we can recognize at many points as analogous to what we now consider "modern" – but more convival and peaceful. It was the best society one could hope to see in a world of high population and dwindling resources. It was a kind of human cultural climax, from which the contemporary world may still have much to learn. The sophistication of social devices was remarkable:

> Local tax collectors developed the corollary function of wholesalers or brokers, gathering the local surplus of agricultural or manufactured goods for sale to transport merchants. The latter ranged from itinerant peddlers to large-scale, monopolistic operators. An extensive network of inns that developed to accomodate these traveling merchants became the inn system that was to continue with little change until recent times.[7]

Old and already effective farming skills were enhanced by new tools, seeds, plants, and a broad exchange of information via the exhaustive agricultural encyclopedias and treatises now made available by mass woodblock printing. The poet and administrator Su Shih wrote a prose piece on a unique new rice-transplanting device that looked like a wooden hobbyhorse. In rice seed alone a revolution took place: a drought-resistant seed from central Vietnam came to be used widely. It could be grown on poorer soil, and so expanded available rice acreage. "By Sung times almost all of the types in use before the middle of T'ang had disappeared . . . a southern Sung gazeteer for the county of Ch'ang-shu in the lower Yangtze delta lists twenty-one kinds of moderate gluten rice, eight of high gluten rice, four of low gluten rice and ten miscellaneous varieties as being cultivated there."[8] Mark Elvin says that by the thirteenth century China had the most sophisticated agriculture in the world, with India the only possible rival.[9]



CHINA BY COTTERELL & MORGAN (1975)

This woodcut, probably from the Sung dynasty, shows farmers, merchants, and city dwellers working and hanging around the city walls.

> Increased contact with the market made the Chinese peasantry into a class of adaptable, rational, profit-oriented, petty entrepreneurs. A wide range of new occupations opened up in the countryside. In the hills, timber was grown for the booming boatbuilding industry and for the construction of houses in the expanding cities. Vegetables and fruit were produced for urban consumption. All sorts of oils were pressed for cooking, lighting, waterproofing, and to go in haircreams and medicines. Sugar was refined, crystallized, and used as a preservative. Fish were raised in ponds and reservoirs to the point where the rearing of newly-hatched young fish for stock became a major business.[10]

Trade and commerce weren't new to China, though. In the first century B.C. Ssu-ma Ch'ien wrote:

> . . . from the age of Emperor Shun and the Hsia dynasty down to the present, ears and eyes have always longed for the ultimate in beautiful sounds and forms, mouths have desired to taste the best in grass-fed and grain-fed animals, bodies have delighted in ease and comfort, and hearts have swelled with pride at the glories of power and ability. So long have these habits been allowed to permeate the lives of the people that, though one were to go from door to door preaching the subtle arguments of the Taoists, he could never succeed in changing them.[11]

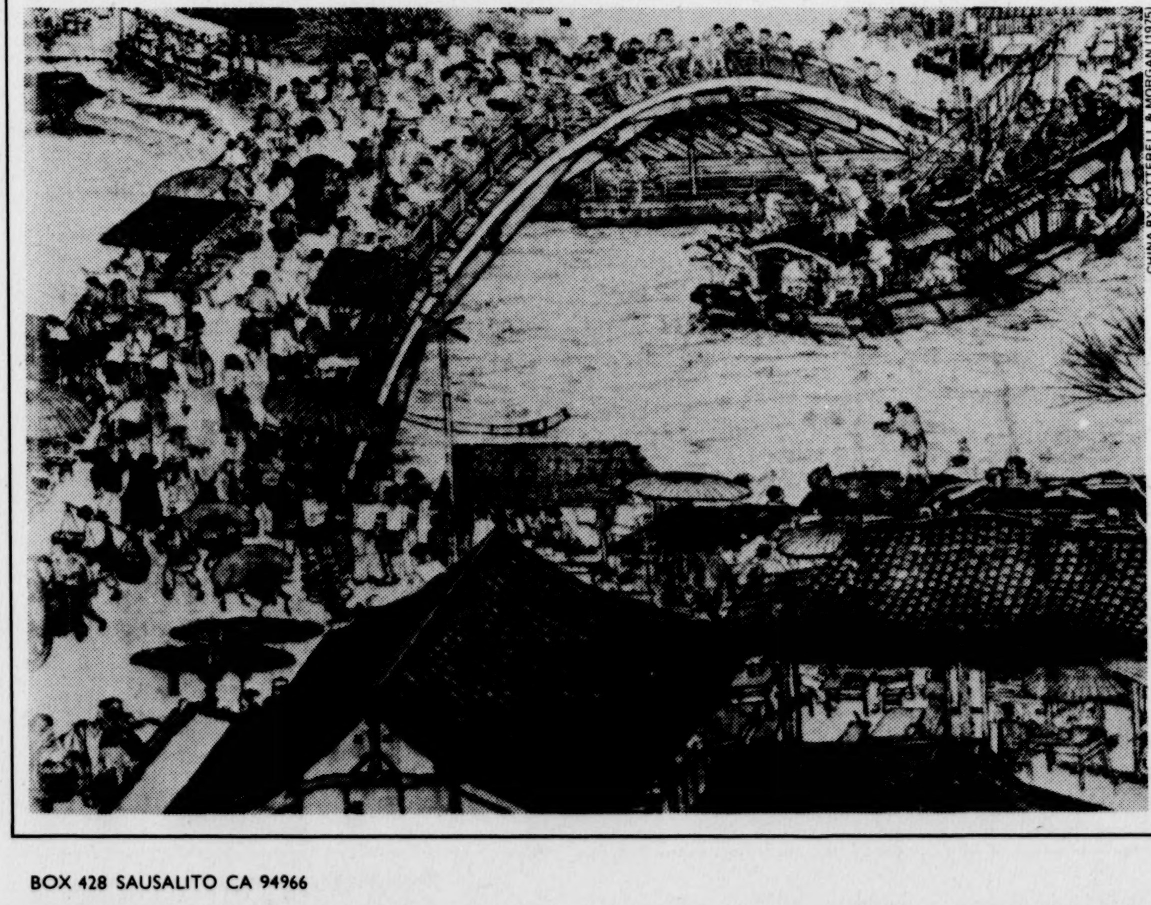
Ssu-ma did short biographies of famous commoners who made fortunes by buying low and selling high, gambling on surplus and dearth. The merchant Chi-jan of the fifth century B.C. said, "When an article has become extremely expensive, it will surely fall in price, and when it has become extremely cheap then the price will begin to rise. Dispose of expensive goods as though they were so much filth and dirt; buy up cheap goods as though they were pearls and jade. Wealth and currency should be allowed to flow as freely as water!"[12]

This trade was conducted with rolls of silk, bales of rice, salt, or copper cash as the media of exchange. Cash was often scarce, and by mid-T'ang it was noted that mining the copper and minting and transporting new coin cost twice as much as its face value as money. All sorts of "flying money" – promissory notes, letters of credit, and private-issue proto-money – were succeeded by government-issue paper money in the eleventh century. During the thirteenth century, and under the Mongols in the early fourteenth, the government even accepted paper money for the payment of taxes! Marco Polo was astonished to see paper used just as though it were metal. If the flow of currency began to falter, the government instantly offered silver or gold as payment for paper. "For 17 or 18 years the value of paper money did not fluctuate."[13]

THE SOUTHERN CAPITAL

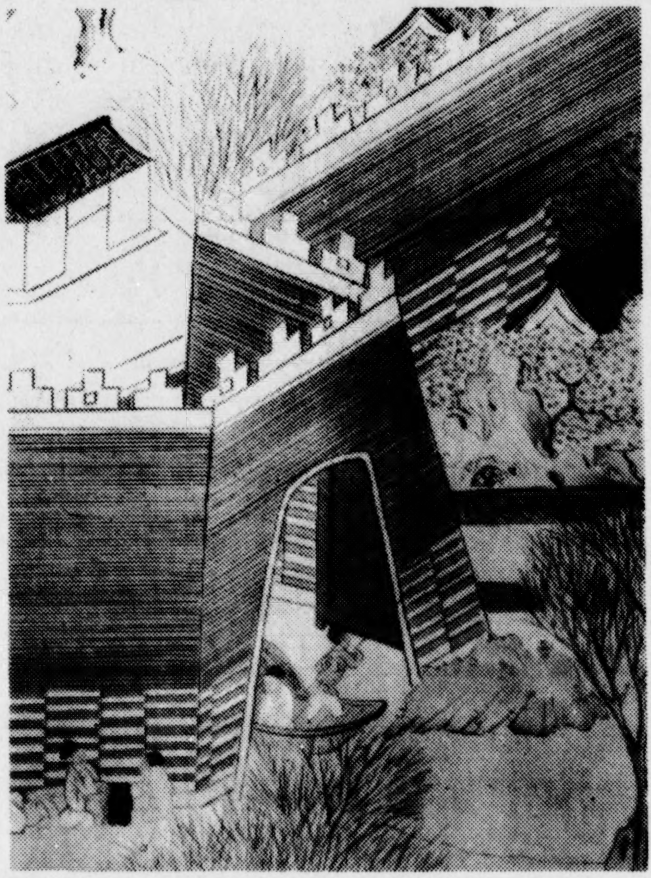
In the coastal province of Chekiang, south of Shanghai, there are still some upland areas of Miao population. In the fifth century A.D., when Hsieh Ling-yun walked the hills and worked on his rural estate, the greater part of the province was considered barbarian. It is named for the Che River, which reaches into the southern slopes of the Huang mountains, and the 3000-foot hills on the Kiangsi-Anhwei border. The river is famous for the tidal bore that plays in its mouth at Hang-chou Bay. A decade after the fall of the Northern Sung capital K'ai-feng to the Juchen (Chin), the town of Lin-an, at the rivermouth, was declared the new capital. The emigre emperor, his court, and crowds of refugees of the northern ruling class settled in. The name was changed to Hang-chou.

In earlier times the Lin-an area had been a marsh. The main river was channelized and subsidiary streams dammed in the fifth century A.D. The original town grew then on land between the lake thus formed, "West Lake," and the main Che River. It has come to be considered one of the most scenic places in China. Great care has been taken to keep the shallow lake clean. It was a true public park, with laws against planting water-chestnut (which would rapidly spread) or dumping trash in the water. Public pavilions, docks, and



CHINA BY COTTERELL & MORGAN (1975)

The lively city of K'ai Feng, the Northern Sung capital, circa AD 1125 during the Qing Ming (Spring Festival). From Chang Tse-tuan's painted scroll "Spring Festival On the River."



THE METROPOLITAN MUSEUM OF ART, NEW YORK

Boat passing through a water gate in the city wall, from the "Spring Festival On the River" scroll.

shade areas were built. Zoning restrictions designated acceptable architectural styles. Buddhist temples were looked on with favor; one of the most famous structures overlooking the lake was the pagoda at Thunder Point. Built of blue glazed brick, it was 170 feet high.

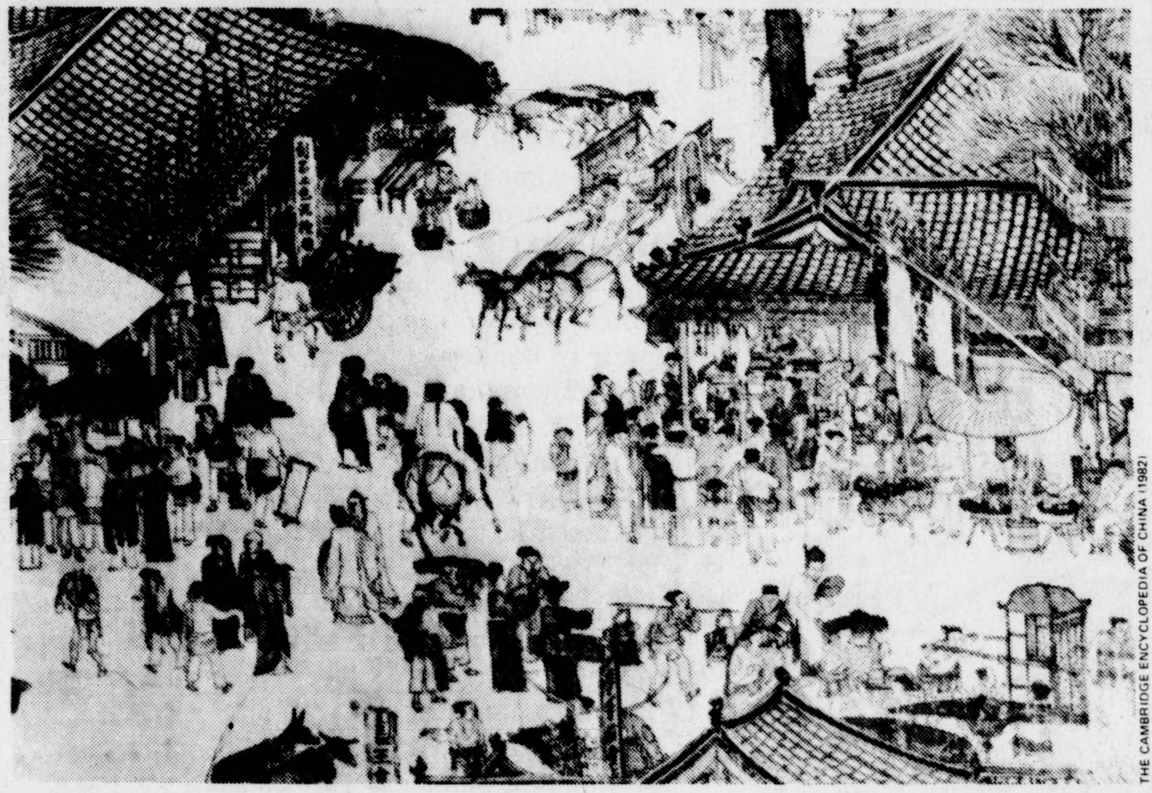
Po Chu-I had served as prefect here in the ninth century, and Su Shih did major maintenance and improvement on the lake when he was briefly prefect in the late eleventh century. The causeway on the lake is named after him. [14]

In 1136 Hang-chou had a population of around 200,000. In 1170 this had become half a million, and in 1275 it was well over a million and perhaps the largest single concentration of human beings in the world at that time.[15] It may also have been the richest. The capital fell to the Mongols in 1279, after a siege of several years. Marco Polo was in the city soon after it surrendered (he worked for Khubilai Khan for 17 years) and has left eloquent description:

> On one side is a lake of fresh water, very clear. On the other is a huge river, which entering by many channels, diffused throughout the city, carries away all its filth and then flows into the lake, from which it flows out towards the Ocean. This makes the air very wholesome. And through every part of the city it is possible to travel either by land or by these streams. The streets and watercourses alike are very wide, so that carts and boats can readily pass along them to carry provisions for the inhabitants.
>
> There are ten principal marketplaces, not to speak of innumerable local ones. These are square, being a half a mile each way. In front of them lies a main thoroughfare, 40 paces wide, which runs straight from one end of the city to the other. It is crossed by many bridges . . . and every four miles, there is one of these squares . . . . And in each of these squares, three days in the week, there is a gathering of 40 to 50 thousand people, who come to market bringing everything that could be desired to sustain life. There is always abundance of victuals, both wild game, such as roebuck, stags, harts, hares, and rabbits, and of fowls, such as partridges, pheasants, francolins, quails, hens, capons, and as many ducks and geese as can be told . . . . Then there are the shambles, where they slaughter the bigger animals, such as calves, oxen, kids, and lambs, whose flesh is eaten by the rich and upper classes. The others, the lower orders, do not scruple to eat all sorts of unclean flesh.
>
> All the ten squares are surrounded by high buildings, and below these are shops in which every sort of craft is practised and every sort of luxury is on sale, including spices, gems, and pearls. In some shops nothing is sold but spiced rice wine, which is being made all the time, fresh, and very cheap.[16]

Hang-chou was kept spotless. The authorities had the streets cleaned and refuse piled at key points where it was loaded into boats. The boats in turn converged and took it out to the country in convoys. Nightsoil (human waste) was collected by corporations each with their own gathering territory who sold it to the intensive truck gardens of the eastern suburbs.[17] (Contrary to common opinion in the West, the use of nightsoil does not pose a health problem if it is aged properly before applying – as it usually is. I poured and gardened with it myself as a Zen student in Japan.) Marco Polo's account of what he and the Mongols called *Kinsai* (from *Hsing-ts'ai*, "temporary residence of the emperor") describes 3000 public baths. "I assure you they are the finest baths and the best and biggest in the world – indeed they are big enough to accommodate a hundred men or women at once."[18]

The rich, bustling life of thirteenth century southern China set the tone for seventeenth and eighteenth century Osaka and Tokyo. (In reading Jacques Gernet and Marco Polo on Hang-chou, I find myself reliving moments in the Kyoto of the 1950s and '60s. A coffee shop on Kawaramachi full of chic western-dressed youth, called "Den-en" after T'ao Ch'ien's poetry of "fields and gardens." A public bath in the Gion proud of its tradition of extra-hot bathwater, to please the ladies of the quarter and the late-night drinkers and gamblers. A small modern-style bar called Tesu – where when asked what the name meant, the modish lady who owned it said, "Why of course, from **Tess of the D'Urbervilles**.") Such cities, though crowded, are not dangerous. Our American image of a city as a faceless network of commercial canyons, bordered by suburbs where no one ever goes on foot, reflects little of the conditions of city life in pre-modern cultures. Like a huge village, Hang-chou had about 15 major festivals a year. In one of these the emperor opened up part of the



"There are shops in which every sort of craft is practised and every sort of luxury is on sale, including spices, gems, and pearls. In some shops nothing is sold but spiced rice wine, which is being made all the time, fresh, and very cheap."

THE CAMBRIDGE ENCYCLOPEDIA OF CHINA (1982)

palace grounds for the street entertainers to put on a street-life show for the people of the court.

Marco Polo:

> The natives of Kinsai are men of peace . . . they have no skills in handling arms and do not keep any in their houses. There is prevalent among them a dislike and distaste for strife or any sort of disagreement. They pursue their trades and handicrafts with great diligence and honesty. They love one another so devotedly that a whole district might seem, from the friendly and neighbourly spirit that rules among men and women, to be a single household.
>
> If they come across some poor man by day, who is unable to work on account of illness, they have him taken to one of the hospitals, of which there are great numbers throughout the city, built by the ancient kings and lavishly endowed. And when he is cured, he is compelled to practice some trade.[19]

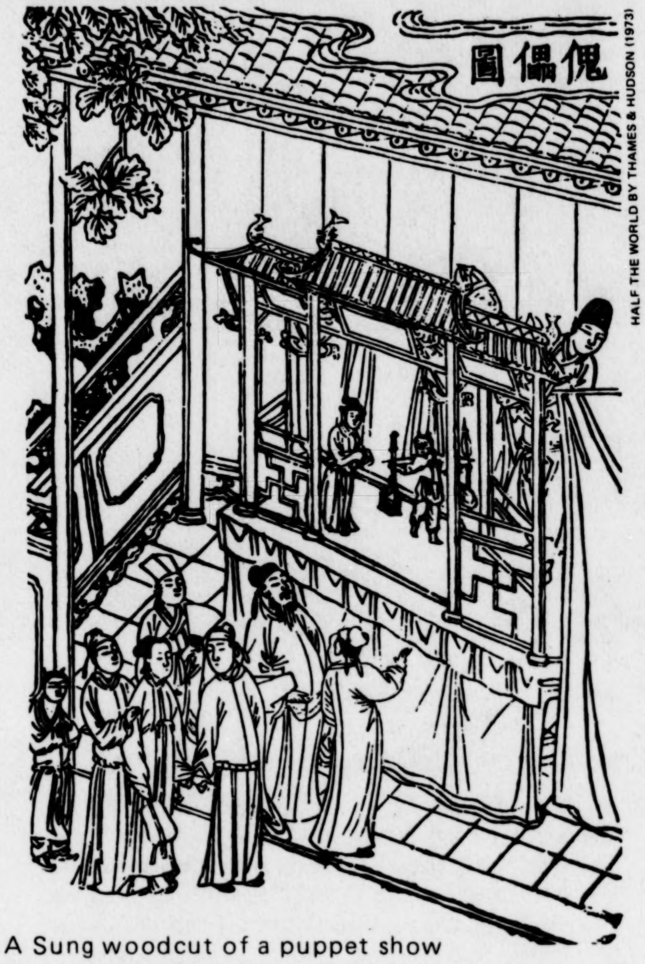
Life in the city went on virtually without cease; the bars and brothels closed around two a.m. and the *abattoirs* started up at three. Till late at night, illuminated pleasure boats drifted on the lake with clan or guild or fraternity parties singing and drinking and eating. Boats of all sizes and styles were available for hire.

> They are roofed over with decks on which stand men with poles which they thrust into the bottom of the lake . . . . The deck is painted inside with various colours and designs and so is the whole barge, and all around it are windows that can be opened or shut so that the banqueters ranged along the sides can look this way and that and feast their eyes on the diversity and beauty of the scenes through which they are passing . . . . On one side it skirts the city, so that the barge commands a distant view of all its grandeur and loveliness, its temples, palaces, monasteries, and gardens with their towering trees, running down to the water's edge. On the lake itself is the endless procession of barges thronged with pleasure-seekers. For the people of this city think of nothing else, once they have done the work of their craft or their trade, but to spend a part of the day with their womenfolk or with hired women in enjoying themselves either in these barges or in riding about the city in carriages.[20]

Produce and firewood came into the city by boat, the latter some distance from the hills of the interior. At the very least 70 tons of rice a day were consumed. Shoppers at the market discriminated between "new-milled rice, husked winter rice, first quality white rice, rice with lotus-pink grains, yellow-eared rice, rice on the stalk, ordinary rice, glutinous rice"[21] and many others. There were some great places to eat:

> Formerly the best known specialities were the sweet soya soup at the Mixed-wares Market, pig cooked in ashes in front of Longevity-and-Compassion Palace, the fish-soup of Mother Sung outside the Cash-reserve Gate, and rice served with mutton. Later, around the years 1241-1252, there were, among other things, the boiled pork from Wei-the-Big-Knife at the Cat Bridge, and the honey fritters from Chou-number-five in front of the Five-span Pavilion.[22]

By the tenth century, woodblock printing was in common use. Literacy and learning spread, so that the earlier, simpler division of society into an illiterate mass and a literate Confucian elite no longer applied. Merchants, wandering monks, peasant-entrepreneurs, daughters of substantial merchants – all read books. "Catalogs, encyclopedias, and treatises appeared which dealt with a wide variety of topics: monographs on curious rocks, on jades, on coins, on inks, on bamboos, on plum-trees . . . treatises on painting and calligraphy; geographical works. The first general and unofficial histories of China made their appearance."[23] The West Lake, already famous from its association with two of China's most highly regarded poets, gave its name to the "Poetry Society of the Western Lake" which counted both natives of the city and visiting



HALF THE WORLD BY THAMES & HUDSON (1973)

A Sung woodcut of a puppet show

literati among its members. It held picnics, banquets, and competitions, and the winning poems were circulated through the society. Hang-chou was a world of soft-handed scholars, dainty-stepping maidens raised behind closed doors, hustling town dandies, urban laborers, just-arrived country girls whose looks would determine if they'd work in a back kitchen or a teahouse.

> The best rhinoceros skins are to be found
> at Ch'ien's, as you go down from the canal
> to the little Ch'ing-hu lake.
> The finest turbans at K'ang-number-three's
> in the street of the Worn Cash-coin;
> The best place for used books at the bookstalls
> under the big trees near the summer-house
> of the Orange Tree Garden;
> Wicker cages in Ironwire Lane,
> Ivory combs at Fei's,
> Folding fans at Coal Bridge.[24]

Most people rose early, finished work early, and left time in the afternoon for shopping and social calls. About three a.m. in the summer, and four in the winter, the bells of the Buddhist temples on the outskirts would begin to boom. At four or five in the morning, Buddhist and Taoist monks were walking down the lanes, beating a rhythm on the hand-held "wooden fish" and calling out the morning's weather – "a light snow just starting" – and announcing the day's events, whether preparations for a festival, a court reception, or a building-code hearing. "Imperial audiences were held at five or six o'clock in the morning. Seven o'clock was considered to be already late in the day."[25]

HATS AND BUCKLES

At the time of the Mongol conquest poor people still had some meat to eat, a little pork or fish. In recent centuries meat has been a once or twice-a-year treat. The wealthy could also afford wild game. There were no sanctions, apparently, against market hunting, though shoppers were warned to beware of donkey or horsemeat being sold as venison.[26] The deforestation that had been predicted by Shen Kua two centuries earlier (he was almost exactly contemporary with Su Shih) was well underway. Sung economic expansion stimulated remarkable industrial development – "comparable to that which took place during the earlier phases of England's industrial revolution." The quantity of iron produced during the Northern Sung period was not matched again until the nineteenth century. Tuan Yi-fu summarizes:

> The rapid growth of ironworks exerted pressure on timber resources, which were already heavily pressed to meet the needs of large city populations and of shipbuilding. Many hundreds of thousands of tons of charcoal were swallowed up by the metal industries. In addition, there was the demand for charcoal in the manufacture of

China's Population Through Time

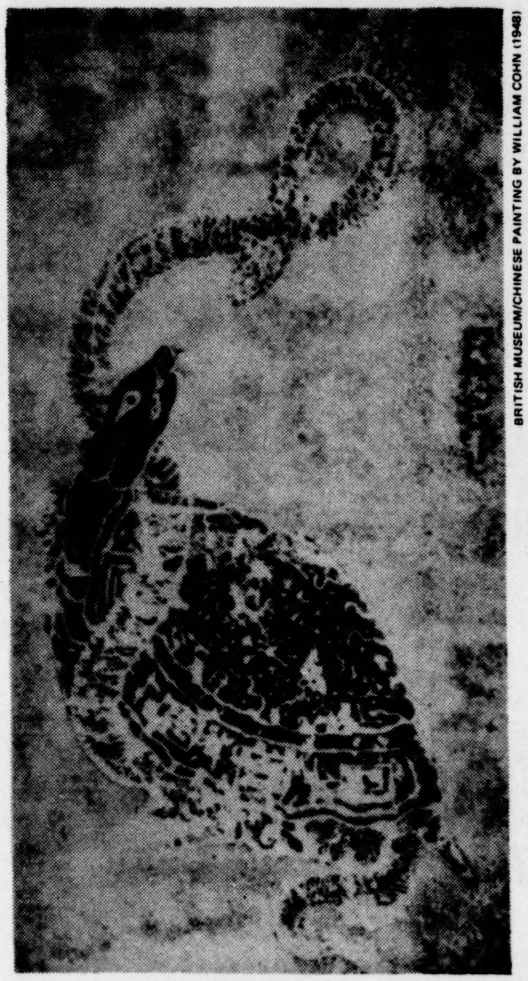
The Neolithic settlement of Pan-p'o ts'un (one of thousands)	5,000-4,000 B.C.	A village of 200 houses, 5-600 people
Shang dynasty	1766-1112	4-5 million
Warring States	513-221 B.C.	50 million
Former Han (census)	A.D. 2	58 million
Later Han (census)	57	21 million reported; modern estimate: 40-45 million
	150	50-55 million
Western Chin	280	16 million
Sui (census)	609	46 million reported; modern estimate: 54 million
T'ang (census)	742	51.5 million reported; modern estimate: 74 million
Sung	980 1100	60-70 million 100 million
Ming	1600	150 million
Ch'ing	1700	150 million
	1800	300 million
	1850	430 million
	1900	340 million
Peoples' Republic	1980	1 billion probably

> salt, alum, bricks, tiles and liquor. The Northern Sung period must be seen as a time of rapid deforestation. North China suffered first . . . . Firewood and charcoal for the cities and the industries had to be transported from the South. There was an acute shortage of fuel in the North, a shortage which was partially met by the effective substitution of coal for charcoal in the eleventh century.[27]

Wetlands were drained. It seems the expansion of ricefields into "wastelands" or marshes often went against the interests and desires of the local people, who relied on ponds and estuaries for fishing and gathering edible water plants. Large landowners or the government itself undertook these projects, looking for profits or taxes. (The chain of events that led to the execution of Hsieh Ling-yun started with his plan to drain the Hui-chung lake, near the modern town of Shao-hsing. This lake was on public land, but a landowner of Hsieh's stature could usually have expected to get away with it. The governor of the province however was an old rival, and his enmity combined with the reports of clashes between local peasants and Hsieh's armed retainers opened the way to a charge of rebellion.) In the late Sung the government encouraged small farmers, by granting tax exemptions, to go into marshy grounds on the Yangtze delta. The loss was not only wild food previously gathered by the poor, but habitat for water-fowl and other members of the marshy ecosystems.

Along with wetlands and forests, the people as a whole were losing accurate knowledge of nature. For the last few centuries it has been believed in China that tortoises were female to the male of snakes; a bronze statuette shows a tortoise and snake copulating. The correct information of sunburned naked boys or old fishermen who knew better became of no account. The harmless gecko (wall lizard) and the toad came to be considered poisonous. The big-shouldered wild boar, *Sus scrofa*, which appears in Han hunting scenes, and is still the type of pig in T'ang art, is replaced in the art of later dynasties by the sway-backed droop-eared domestic pig type.[28]

From Shang to Ch'in times animals and insects appear in Chinese art in the conventionalized forms sometimes associated with the "Scythian" art of ancient central Asia. None of the designs are floral, and those which seem so are actually loops and spirals of insects and reptiles.[29] Realistic animals appear from the Han dynasty onward – deer being chased by hounds, a tiger with a collar. Later representation of animals tends more and more to cleave to symbolic and legendary significance. "Everything in their painting, carved panels, lacquered screens, pieces of tapestry or embroidery, stone bas-reliefs, or the decorations on furniture and buildings means something. It is this fact that helps to explain why certain animals appear with great frequency, while others equally well known occur but seldom, or are altogether absent."[30]

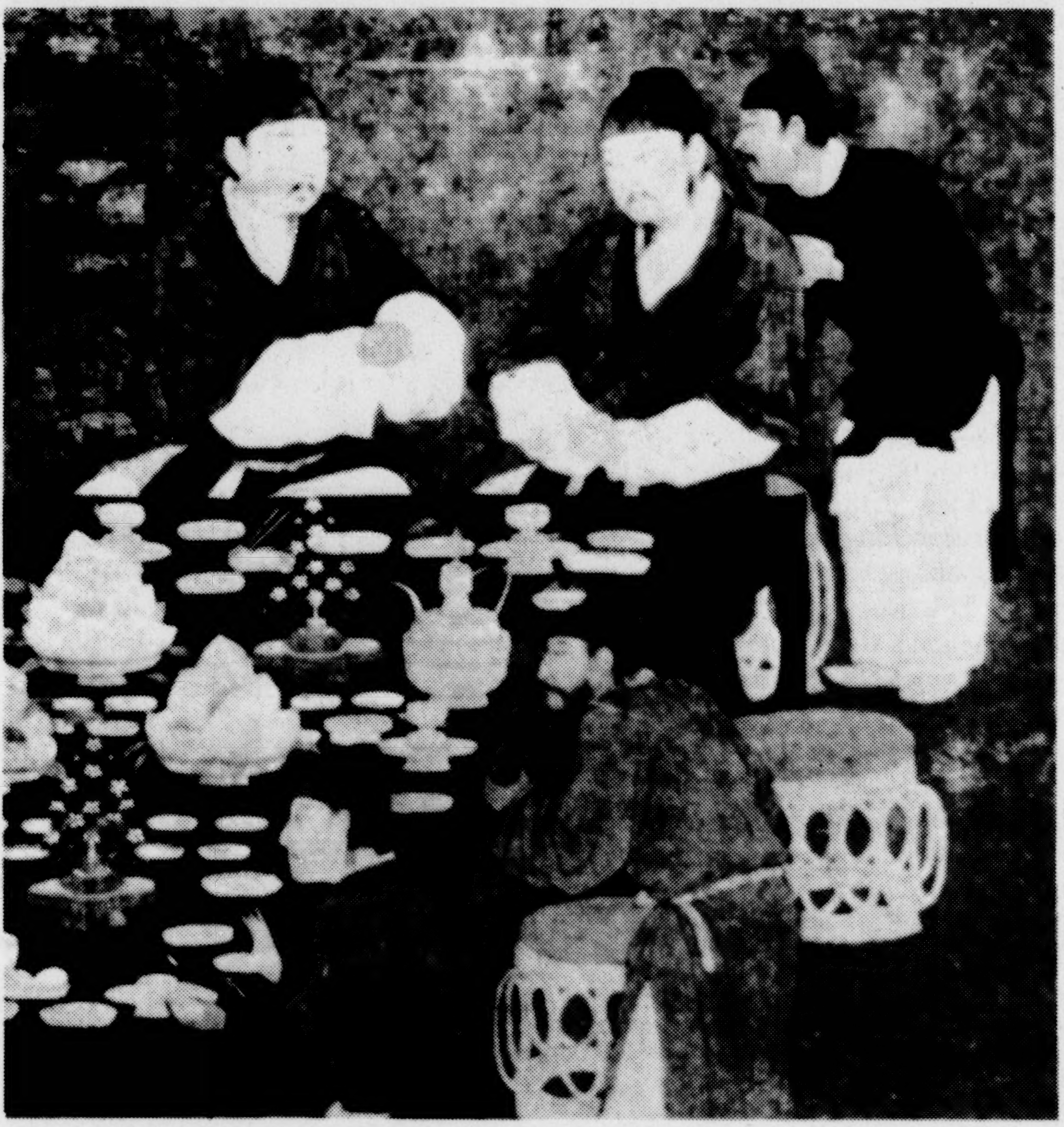

BRITISH MUSEUM/CHINESE PAINTING BY WILLIAM COHN (1948)

In later dynasties the Chinese believed tortoises were female to the male of snakes. This is a rubbing of a stone engraving which itself copied a painting by Wu Tao-tzu, ***Tortoise Coupled with Serpent*** (8th century A.D.).

Thus leopards were far more common in China than tigers, yet are rarely seen in art. Other animals that seldom appear are the hedgehog, shrews and moles, the common muskshrew of the southeast, the scaly anteater, the civets, and many rodents including the porcupine. Insects are often represented in many media. In Han times carved jade cicada were placed in the mouth of the dead. Entirely lifelike hairy-clawed crabs were constructed in bronze. In Sowerby's study on "nature in Chinese art" we find included a glass snuff bottle with a butterfly in low relief on black glass; an unidentified fish in jade; a marble seal with a toad carved on the top; realistic scroll paintings of carp, minnows, knife-fish, mandarin fish, catfish, and bitterlings; a split bamboo with a wasp inside all carved in ivory; an unglazed statue of a Bactrian camel; a lifelike elephant with a harness from the Six Dynasties period; and a bronze buckle inlaid in silver, in the form of a rhinoceros.

The poor rhinoceros. A hat of some sort, and a girdle or belt with a buckle, were essential to male dress. Gernet says:

> These were the two things which distinguished the Chinese from the barbarian . . . the finest



Detail from "A Literary Gathering," showing the social life of the Sung cultured elite. Attributed to Emperor Hui-tsung, the last emperor to reign in the Northern Sung.

THE CAMBRIDGE ENCYCLOPEDIA OF CHINA (1982)

girdles had plaques or buckles in jade, in gold, or in rhinoceros horn. The horn was imported from India, and in particular Bengal, which was supposed to have the best horn . . . . "The Chinese " says an Arab account of the ninth century, "makes from this horn girdles which fetch a price of two or three thousand dinars or more . . . ." The astonishing prices fetched by these horns and the intense delight taken by Chinese in ornaments made from them can hardly be explained by their rarity value alone: superstition as well as artistic taste must lie at the root of this passion. And indeed we find that "sometimes the horn is in the image of a man, or a peacock, or a fish, or some other thing."[31]

DISTANT HILLS

For those men who passed the civil service examinations and accepted official posts, travel from place to place became a way of life. They were commonly transferred every three years. Su Shih was born in Szechwan near the foot of Mount Omei in 1037. Like many who rose to political and literary eminence in the Sung, he came from relatively humble people, "connected with the local weaving industry." His grandfather had been illiterate. He and his younger brother were locally tutored by a Taoist priest. Together with their father they traveled the thousand-mile journey down the Yangtze and north to the capital of K'ai-feng, where both boys passed the examinations the first try, a striking feat. In his early poem "On the Yangtze Watching the Hills" – traveling by boat with his father and brother through the San-hsia Gorge – Su Shih opens some of that space for us:

From the boat watching hills – swift horses:
A hundred herds race by in a flash.
Ragged peaks before us suddenly change shape,
Ranges behind us start and rush away.
I look up: a narrow trail angles back and forth,
A man walking it, high in the distance.
I wave from the deck, trying to call,
But the sail takes us south like a soaring bird.[32]

All three were given employment. In 1066 the father died and the two sons returned to bury him in Szechwan. It was the last time Su Shih saw his native village. He was 29.

This mobility contributes to the impression we get from Su and his cohorts that they no longer cared about particular landscapes. Indeed, for many of them there was no place in China they called home enough to know the smells and the wild plants, but during their interminable journeys on river boats and canal barges the scenery slowly unrolled for them like a great scroll. At the same time there was a cheerful recognition and acceptance of the fact that "we live in society." The clear, dry, funny poems of daily life with family and neighbors that came of this are marvelous. Taoist ideas of living in mountain isolation, or breaking conventions, came to be seen as romantic and irresponsible. Yoshikawa comments on the optimism of Sung poetry, and suggests that it echoes the optimism of the ancient **Book of Songs (Shih Ching)**, with its care for daily tasks and the busy space within the farmyard. The dominant emotion expressed in T'ang dynasty writing is sorrow and grief: humankind is all too impermanent, only mountains and rivers will remain.[33] Sung poets like Mei Yao-ch'en might write in rough plain language, or a low-key style, of things the elegantly intense T'ang poets would never touch. Such is Yang Wan-li's poem on a fly:

> Noted outside the window: a fly, the sun on
> his back,
> rubbing his legs together, relishing the
> morning brightness.
> Sun and shadow about to shift – already he
> knows it,
> Suddenly flies off, to hum by a
> different window.[34]

Su Shih, lying on his back in a boat, takes detachment a step further:

> . . . I greet the breeze that happens along
> And lift a cup to offer to the vastness:
> How pleasant – that we have no thought for
> each other![35]

Kojiro Yoshikawa's quick analysis of nature images in Sung poetry notes that "sunset" is a common reference in the T'ang with a strong overtone of sadness. Su Shih, writing on a sunset seen from a Buddhist temple, is able to freshly say

> Faint wind: on the broad water,
> wrinkles like creases in a shoe;
> Broken clouds: over half the sky,
> a red the color of fish tails.[36]

Rain, Yoshikawa observes, is a frequent Sung reference – rain to listen to at night while talking with a bedmate, rain to burn incense and study by.

> Shall I tell you the way to become a god
> in this humdrum world?
> Burn some incense and sit listening to the rain.
> –Lu Yu[37]

In a society of such mobility, complexity, and size, it is to be expected that a "sense of place" would be hard to maintain. Humanistic concerns can be cultivated anywhere, but certain kinds of understanding and information about the natural world are only available to those who stay put and keep looking. There is another kind of "staying put" which flourished in some circles during the Sung, namely the meditation practice of Ch'an Buddhism, *zazen*. What some Sung poets and thinkers may have lost in terms of sense of natural place was balanced perhaps by a better understanding of natural self. A different sort of grounding occurred.

Much of the distinctive quality of Sung poetry can be attributed to the influence of the relentless and original Su Shih. Su was also an advanced Ch'an practicer, which is evident in his resolute, penetrating, sensitive body of work. The Ch'an influence is not at its best in the poems about monks or temples; we find it in plainer places. But when Su says of the sky,

"How pleasant – that we have no thought of each other" it is not to be taken as an expression of the heartlessness or remoteness of nature. Within the mutual "mindlessness" of sky and self the Ch'an practicer enacts the vivid energy and form of each blade of grass, each pebble. The obsession that T'ang poets had with impermanence was a sentimental response to the commonly perceived stress of Mahayana Buddhism on transiency and evanescence. Ch'an teachers never bothered with self-pity, and brought a playful and courageous style of give-and-take to the study of impermanent phenomena. I suspect that Sung poets were more dyed with the true spirit of Ch'an than those of the T'ang. From the standpoint of the natural environment, the T'ang view can almost be reversed – it seems the mountains and rivers, or at least their forests and creatures, soils and beds, are more fragile than we thought. Human beings grimly endure.

THE BORE

The rulers and courtiers of Hang-chou never fully grasped the seriousness of the Mongol threat. Dallying in the parks, challenging each others' connoisseurship, they carried aestheticism to impressive levels. Mongka Khan, who ravaged Tibet, and his brother Khubilai left Southern Sung on the back burner for a decade or so while they consolidated their northern and western borders.

In Hang-chou every September the people of the city thronged out to the banks of the Che River to witness a spectacle belonging to a scale even larger – their own unwitting point of contact with the dragons of the whole planetary water cycle. This was the annual high-point of the tidal bore which came in from the bay, up the river, and right by the town. Viewing platforms were erected for the emperor and his family. One year when the huge wall of water came rushing up, a surprise wind rose behind it, and the eagre went over the barriers and drowned hundreds of people.[38]

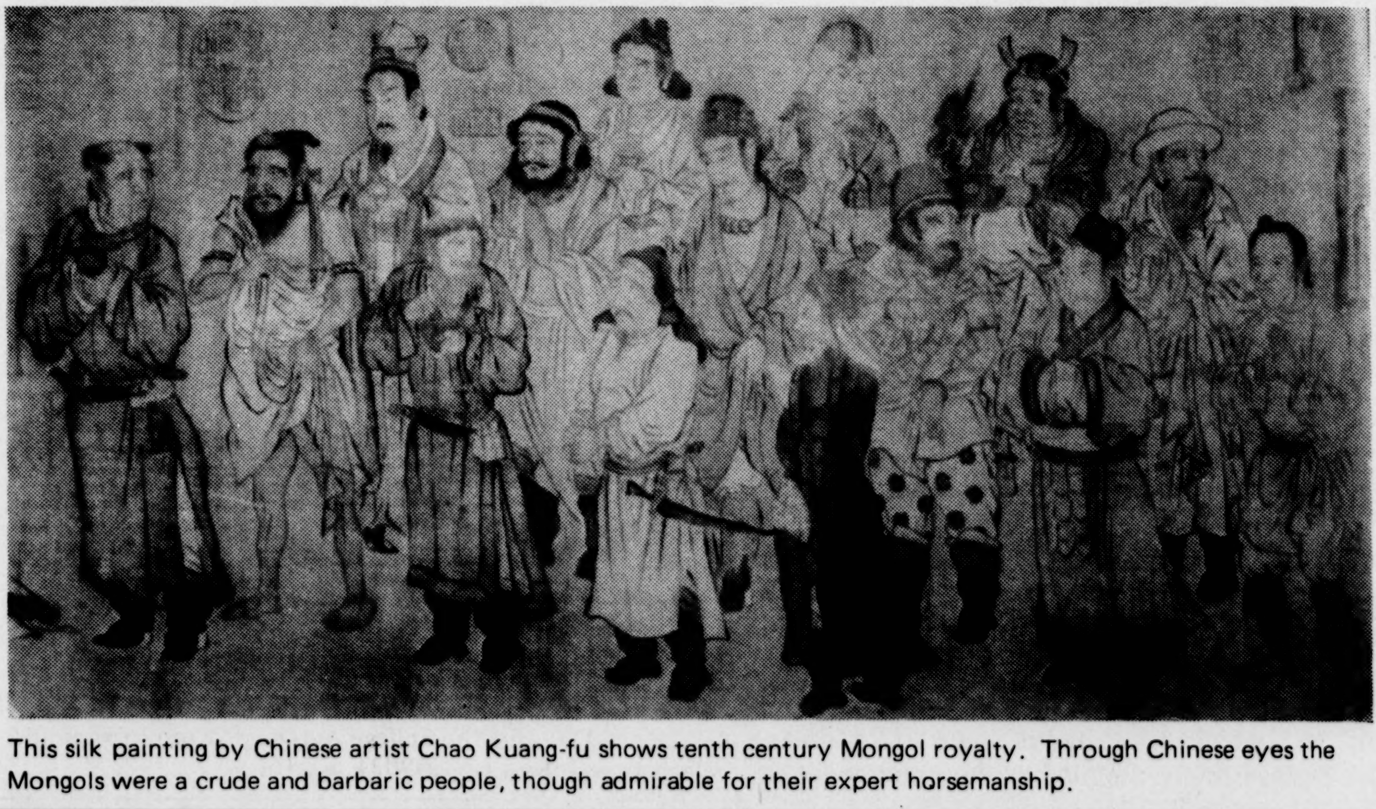
MOUNT BURKHAN KHALDUN

Sung dynasty China was a high-water mark of civilization. Joseph Needham and Mark Elvin take thirteenth century China to have been on the verge of a western-style technological revolution; at least many of the preconditions were there. (Yet it would be foolish to assume that such an evolution is necessarily desirable.) The Mongol conquest was a blow to the culture, but without it, China would probably have gone through a similar process – a stabilization, fading of innovation and experiment, and a long slow retreat of both economy and creativity. Having granted this decline, it must be pointed out that no Occidental culture can approach the time-scale of stability and relative prosperity this decline encompassed. Reischauer's comment that "there are few historic parallels except among primitive peoples"[39] strikes far.

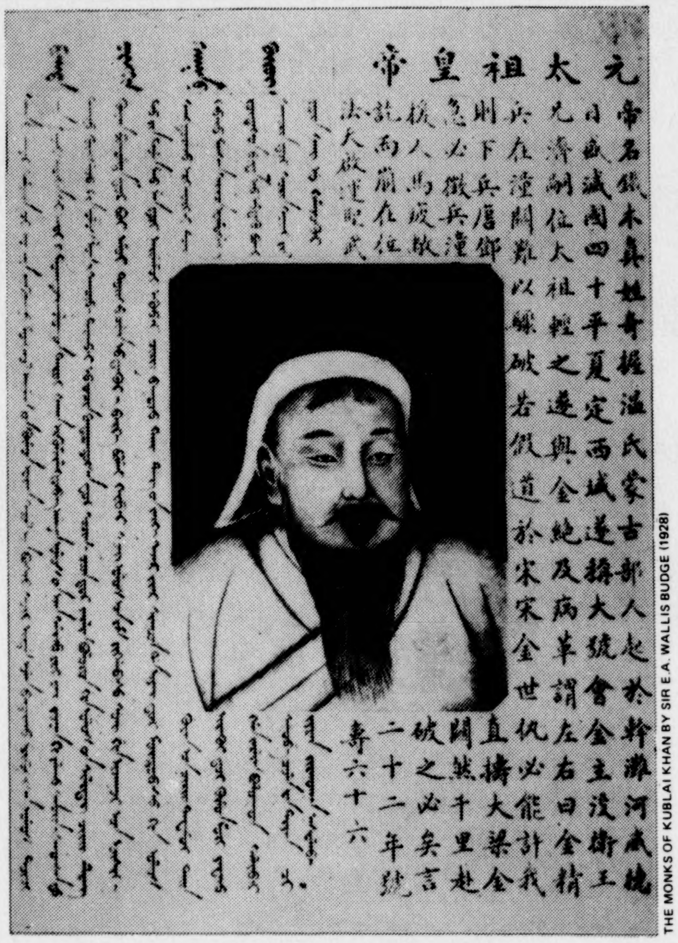
Lively though it was, the Sung had severe problems. Half the people of the Northern Sung were tenant farmers paying half their farm income as rent to the landlords. Declining natural resources and growing population ended experimental ventures into labor-saving devices: materials grew expensive as labor became cheap. Smaller farms, overworked soil, and more people brought tax revenue and personal income down. The frontier territories of the south and southwest were saturated. In spite of all the (almost self-congratulatory) social concern of the Neo-Confucian philosophers, no analysis went deep enough. Millions of people who worked in the salt marshes of the Huai River valleys were virtual slaves.

Far north of the sinicized juchen and their captured realm, across the Ordos and the Gobi, lived the Mongol tribes. Some Mongol groups associated Mount Burkhan Khaldun, near the head of the Onon River (a tributary of the Amur) and south-southeast of Lake Baikal, with their legendary ancestors the Blue Wolf and his wife the Fallow Deer. About 1185 an 18-year-old youth named Temujin fled for his life to the slopes of this mountain, pursued by rival Mongol horsemen of the Merkit tribe. For days they pursued him through the willow thickets and swamps of the densely forested upland. They could follow his horse's tracks but they could not catch up with him. Eventually the Merkit contented themselves with taking some women from the camps below, and left. **The Secret History of the Mongols** has Temujin saying, as he descends the mountain,

> Though it seemed that I'd be crushed like
> a louse, I escaped to Mount
> Burkhan Khaldun.
> The mountain has saved my life and my horse.
> Leading my horse down the elk-paths, making
> my tent from the willow branches, I
> went up Mount Burkhan.
> Though I was frightened and ran like an insect,
> I was shielded by Mount Burkhan Khaldun.
> Every morning I'll offer a sacrifice to
> Mount Burkhan.
> Every day I'll pray to the mountain.
> Then striking his breast with his hand,
> he knelt nine times to the sun,
> Sprinkling offerings of mare's milk in the air,
> And he prayed.[40]


HALF THE WORLD BY THAMES & HUDSON (1973)

This silk painting by Chinese artist Chao Kuang-fu shows tenth century Mongol royalty. Through Chinese eyes the Mongols were a crude and barbaric people, though admirable for their expert horsemanship.



THE MONKS OF KUBLAI KHAN BY SIR E.A. WALLIS BUDGE (1928)

Temujin, better known by the name Jenghiz Khan (literally, great leader) that was given to him in 1206 when he assumed leadership of all the Mongols. His grandson Kubilai Khan finished the Mongol conquest of China and founded the Yuan dynasty, the first time in history that China was ruled by foreign domination.

This survivor, who had lived for years with his abandoned mother and brothers by trapping ground squirrels and marmots, snaring ducks, and fishing, went on to be chosen the supreme leader of all the Turko-Mongol tribes. At the gathering or *quriltai* of 1206 he was given the title "Jenghiz Khan." After that, he began his first campaign in northern China, attacking the cities of the Tungusic Chin. Many campaigns and victories later the Buddhist monk Li Chih-ch'ang visited him at his headquarters in Karakorum. Jenghiz Khan is reported as saying,

> Heaven is weary of the inordinate luxury of China. I remain in the wild region of the north, I return to simplicity and seek moderation once more. As for the garments that I wear and the meals that I eat, I have the same rags and the same food as cowherds and grooms, and I treat the soldiers as my brothers.[41]

Jenghiz Khan did not exactly live a simple life, but he was determined and very tough. He was also a brilliant military strategist. Many grassland nomad warriors before him had won victories from the Chinese or Turko-Iranians, but none left behind an empire and the beginnings of an administration. This was partly because he paid close attention to the engineers and architects among his prisoners of war, and they taught him how to besiege a city and how to broach the walls. ■

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ALASKA THE POINT OF IT

Novel notes by Ken Kesey

JUNEAU AIR TERMINAL

COMING AND GOING, ebbing and flowing, flying and landing and sailing off again on the high tides of a boomtime economy: fairskinned Nordic fishermen their poor necks well-done by a frycook sun . . . Chicanos up from Anaheim seeking work, homemade tattoos on their biceps: "Mota Man," "T-Town," "De Nada" . . . ex-flower children on a new trip, sad bags under their arms and eyes . . . Coast Guarders, cooks, camera nuts . . . vacationing podiatrists with footlockers full of fish to ship . . . a swarthy swagman with outback eyes and his hat brim pinned up on one side by a broach with a carving of a kangaroo in case some dense Yank can't divine his accent . . . brimful cannery beauties with buckknives scabbarded on their bountieous butts, flying home to see Mom and Dad in Muncie long as canning's so slack with this botulism scare I mean . . . gullied land management experts come up years ago for the Department of Interior on a forest renewal project, and dropped out to go to see and seed . . .Ph.D.s from Pepperdine now got calluses on their thumbs big as a Phybate key . . . stringy longhairs all bandanna-wrapped and knee-patched silent . . . grandpas about to board kissing scruffy grandkids goodby begging them Don't be so dern stuck up up here fly on down we'll take you to Disneyland you like Mickey Mouse don'cha? . . . lawyers with battered briefcases and bellies jogged fit enough to keep up with their fisher/miner clients . . . loosers, boozers, floozies and flounderers . . . pluggers and corkers and down, dirtpoor-looking highliners from Bristol Bay in actual fact pulling in a cool three hundred grand a year not counting over-the-side sales and

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*The author of **One Flew Over the Cuckoo's Nest** and **Sometimes A Great Notion** has his teeth in a newer fiercer Oregon, the "vast and fast" state of Alaska. For now called **Sailor Song**, the new novel is at this point an accumulation of notes. Kesey's letting some out for publication, wet as they are, in the hope they might draw support for a wider Alaskan research effort. There could be a joint expedition of CQ and Kesey's mag **Spit in the Ocean** to Alaska to make special issues of each, celebrating the state's worthiest edges and helping toward a fine eventual novel. We can't afford it and he can't; maybe some concatenation out there can.*

*Photographer Brian Lanker is a two-time Pulitzer winner now seen most often in **Sports Illustrated**. He's a Eugene, Oregon, neighbor of Kesey's. For a look at **Spit in the Ocean**, try the Neal Cassady issue, $5 from **Spit**, 85829 Ridgeway Road, Pleasant Hill, OR 97401.*

—Stewart Brand

At the top of White Pass on the way from Skagway to the Yukon the novelist engaged in Tundra Yoga.

BRIAN LANKER

coke deals . . . fraternity boys headed back for fall registration bragging how *next* season no matter what the old man says about the necessity of a higher education or for sure the season *after* next . . . roofers stinking of tar waiting to bush hop to a renovation job in Skagway . . . bread-brown hikers in *lederhosen* and knee-high hand-knitted Cowichan socks, looking so healthy it makes you want to throw up . . . Descendants of Early Aboriginal Peoples making miraculous comebacks from what everybody 20 years ago was certain was the DEAP end . . . .

Coming and going, walking and waiting, boarding and de-planing, in the Juneau Air Terminal on a misty northern morn. ▫

SIXTYFOUR DERELICT

His head light and his pack hot and heavy he came crashing down through the verdant foothill growth – the bear flower and jacob's ladder and rock jasmine; the runty little rhododendron called lapland rosebay and the tiny shy maidens hanging their pale timorous faces among the roots of the Sitka spruce; the spiney wildrose and raspberry and even spinier devil's club that was nothing more than leafless blond sticks bristling with needles that could fill your hand and fester for weeks – out into the teeming meadow through cow parsnip and ladies' tresses and bog orchid – moving fast to stay ahead of the mosquitoes that rose in clouds at every step – through the squishy mattress of that swampgrass that can survive in the glacial run-off as well as the salty high tides . . . finally out onto the naked flats toward the solitary derelict he had spotted through his binoculars five hours and five thousand feet earlier.

He shrugged his pack off onto the rotting seaboard and collapsed beside it, sucking in loud lungfuls of the clammy air. Good thing he'd hitched to high ground with the boatplane and hiked down; his city-softened respiratory system would have never survived the climb the other direction.

The mosquitoes finally forced him to stand into the delta breeze and he began to explore the hulk. Just another reminder of the power of the '64 earthquake, sucked out to sea by the sudden drain of some port maybe as far away as Valdez, then driven back by the resulting tidal wave like a bathtub toy . . . a top-dollar trawler in its day overall length maybe 60 feet drew probably nine feet shipped a complement of possibly eight men in peak season . . . the vessel of some poor bastard's long drudgery and dream broken and beached and stripped of gear, sinking in stinking ooze amidst clams and vermin and slime, little greygreen bulbs of tidal kelp drooping obscenely from the rusted remnants of the motor block, the tops of the gunnel rib beaded with barnicles . . . beached and broken and woebegone in the soggy memories of that calamitous morning 20 years ago, all naked and embarrassed in the slop and fecundity of a minus tide. ▫

DEAPS

The Amusement Park Goat on a High Rock in the fairgrounds in Juneau told me: "They get pissed. They're sensitive. They get real irritated if you call them wrong. Innuits, for instance, don't like to be called Eskimos. Eskimo means Eaters-of-Raw-Fish and the Innuits want it known they eat a lot of stuff besides fish and cook a lot of it, too."

"What's *Innuit* mean, then?"

"*Innuit,* like most of the names, means 'The People.' *Tlingit* means 'The Real People' so they object to being called anything else. Especially *American Indians*. *None* of them like *Indian*. Or *Native Americans* either. Even *Early Peoples* doesn't please everybody. They make the point that they in actual fact *ain't* the Early Peoples but their descendants, the 'Current People.' "

"You have to refer to them in some way. I'll go along with whatever they want."

The Amusement Park Goat hoofed down the side of his boulder to check out a blowing popcorn bag from yesterday's Eagle-Raven Bingo Jubilee. It was empty. He looked back with his square pupils: "I think the going phrase these days is 'Descendants of Early Aboriginal Peoples.' So when you see a tall or short brown or beige or coffee or devil's-food person with eyes from Tibet and jaw from Samoa and nose from the Navaho and a mouth from sunken Mu, you might get away with calling him a DEAP." ▫

PIZZA TO GO

– big brown Innuit or Aleut wearing a hideous pepper green T-shirt reads GRIZZLY BEAR PIZZA PALACE across the gut, says, "Hell I don't care if the grizzly *was* our sacred totem. I'm very particular about my pizza. The Palace makes the best pizza this size of the lower 48. I tried them all. I'm into pizzas. I ever get married have me a son you know what I'm gonna name him? I'm gonna name him 'Pizza To Go.' So I don't want to hear any more crap about my T-shirt." ▫

WOMEN LIKE BEARS

– fast and feisty, under their layer of lard, funny-faced but could paw your head off you get outta line – rows of canneries, storehouses, loading docks – rusted fleets of refrigerated semitrailers off last fall's ferry, waiting for this season's load of canned fish – day-glo floats piled everywhere with big black numbers, like balls to be drawn in a gigantic bingo game: "Gee – twenty-one, I say G – 21," and women like bears grunt and shuffle their cards – ▫

ALASKA THE POINT OF IT

It was the crystals that appealed to him, the way they dedicated their perfect points to the universe. Not just in the obvious ice formations, or the quartzes cracked from the mines and mountains. He saw it everywhere, stitched into the very fabric of the huge state . . . .

He saw it in the spiney out-poking of the king crab, slow-stalking the ice-caked pots like giant incarcerated snowflakes, and he saw it in the bones of the bait, pinched clean on the pot's bottom. He saw it in the barbed heavens of December as well as the newly opened passes of spring, the rutty, rocky, switchbacking, cliffhanging Alaskan roads that would drill respect into even the most daring driver.

The simple look of the landform commanded respect, from the toothy grin of the glacial shoreline in the southeast to the long swooping spur of the Aleutians, like a curved knife held low in the water against the dark moves of Mother Russia.

And the sound of it, sometimes sharp for scores of miles – a rifle crack, a treetrunk exploding in the terrible cold, a few-and-far-between wolf railing against his loneliness. . . .

And the names, syllables not fashioned by lips – too cold and numb for Ps and Bs, lips get! – but back in the glotal area: Kodiak, Yakutat, Ketchikan, Kuinak – names to clear phlegm from a frozen throat: Iguigig, Kuichak, and Auk. The whole region itself: Say it! *Arctic. Ark-k-k-tik*. Quick! Cut off! The abruptness of the end of the crystalline tip, nipped off neat and perfect. O, when he got high and thought of it all – the prick of the stars; the fork of the young blacktail's antler; the bulging of the elk so silver and thin; the edge of the wind against the face – but not brutal, not like they are always trying to paint it in outdoor magazines . . . simply very keen, like the whetted tip of a steel hook protruding out the head of a rigged herring – it made him shiver.

In some places it was completely concealed, this quality of sharpness. Like the roly-poly brown bear, hiding tooth and claw under a clownsuit of furry lard, or the softly winding waterways gently winding through the soft green islands, or the undulating kelp that gave no hint of how many drownings it may have facilitated.

Yet these soft places were definitely in the minority of the phenomena as he chose to perceive it, and if anything only served to frame that other, clearer quality . . . like the hollow of a woman's throat showing off a fabulous diamond necklace. ▫

THIRD-AND-A-HALF WORLD AMALGAMS

drape around the Kuinak theatre outside the last showing of **Blade Runner** – passing joints, swapping bagged bottles, talking in Gutteral Amalgamese. . . .

Soy saucies in the Northern Sombrero across the street serve Italian tortillas to Aleutian Russians drinking Moosehead beer because the Canadian sailors bought it for them . . . .

The Royal Canadian Training Ship is in, with a cantankerous crew on leave. Bonnie British S.P.s wi' strappin' grand shoulders patrol the streets in their uniforms it is, then . . . .

It's nearly midnight but still bright day. Kids still playing. A smell of hot dogs, crack of a bat. A rush; more third-and-a-half world amalgams, none older than ten, bouncing after a hardball as brown and scuffed and lively as they are – all in under the pick-ups and along the gutter bouncing toward the bright diamond of the bay, all cradled in the cozy pocket of the wooded mountains, the green mitt of a Fourth World God playing home . . . .

Snarl of outrage up from the American Native Brotherhood bingo parlor: Some bastard throw old goddam halibut in through the window! Doors banging. More yelling. Guy comes puffing up laughing, joins the amalgamation – "You throw that fish?" "Not me." "What you running for, then?" "Cause I fought the law and the lawyers won."

In the Pyramid Bar, a Chinese/Alaska nightspot run by a Greek who hires only Filipinos ("They're faster, neater, and they don't take up as much kitchen space as your larger breed of Orientals ..."), the bar band is joined by the ship band off the Japanese cruise ship, the Viking. They plan to jam. The bar band is a Lousiana fiddler and his banjo-picking wife born in Muncie; says on their poster in the Pyramid window: NELL AND NED – SOUTHERN SOUL. The ship band is made up entirely of defected Poles living in Brittany and their specialty is Dixieland and polka. After barely half-a-dozen words exchanged the two groups settle on rock-a-billy and break into a red-hot rendition of "Great Balls o' Fire," the 50-year-old piano player from Warsaw quoting every note from the Jerry Lee Lewis hit right down to the stand-up flourish at the end. They swing straight on to "Shake, Rattle and Roll," then"Honeyshack," and are really about to get it on to something exceptional in a double-amplified version of "Dueling Banjos," when, all of a sudden, a pod of Canadian sailorboys bursts in so jacked-up that they jostle against the video game, short the wallboard plug-ins and sever amplification in mid-duel, and don't even notice! Also five of them are singing the theme song of **The Great White North** at the top of their lungs: "Koo roo koo koo koo koo *ku koooo* ...."

The leader of the pod, 19 and natty in Calvin Klein civvies with the face of French angel, strides right to the bar and informs the barmaid in an accent thick and sweet with many margaritas: "Mademoiselle, we of the good ship St. Lawrence have returned."

"Yeah, I can see that," she has to admit. "I thought you were going to the American Legion dance to test the waters."

"We *did* ... go to the American Legion hall. They would not allow us to enter!"

"Why the *peasants*," she sympathizes, trying not to smile. Probably ought to follow the American Legion lead, she tells herself ... but they're so damn cute; like them Jules and Jim foreign stars from the fifties in their short haircuts and V-neck pullovers. "Were you obstreperous?"

"Ay?" all eight of them ask together.

"Rowdy. Coarse. Common. Were you ob*noxious*?"

"No!" two blond bosunmates from Calgary assure her. "We were what they said was *inebriated*.... "

"But that wasn't it!" the French Canadian angel makes sure she understands. "What it was was your bourgeois American Legionnaires were uptight some foreigner under 60 would step on an American *flag*."

The two blonds from Calgary nod eager agreement: "And they had them *every*where ... like traps, ay?"

Before she can answer ay or nay, the P.A. pops back on and the over-amped boom of the guitar player from Gdansk and the screech of the electric violin from Lake Pontchartrain refill the room. At that moment, as to a cue, the spotlight is wrested from the Canadian sailors ... by a 66-year-old half-owner of a garment shop in Queens, visiting Alaska on a B'nai B'rith bargain tour half-price during these troubled times when the Holyland tours are, understandably, on the the decline.

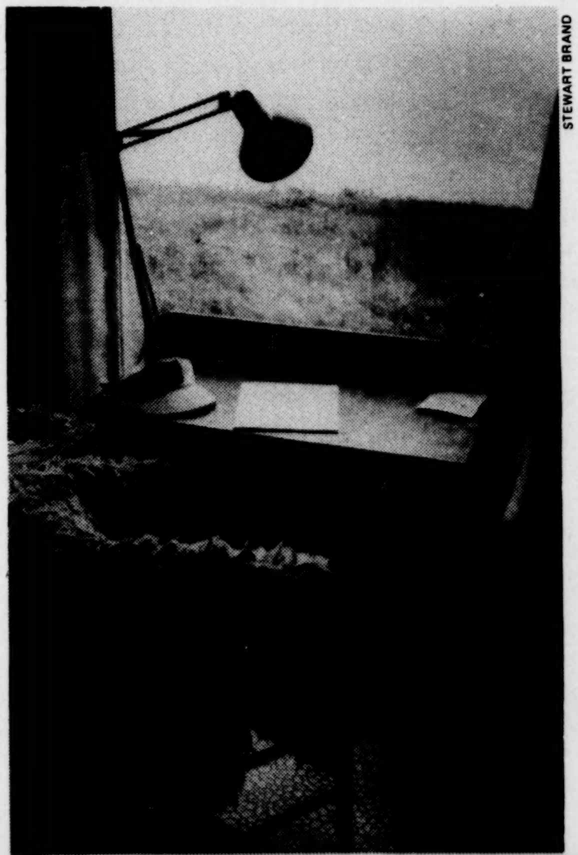
He's been arguing with his wife's sister's Unitarian minister husband about whether the U.S. should censor Israel for attacking Lebanon to get the P.L.O. or not, when, all of a sudden, as the sound system kicks back in, he doesn't *care* if we back Israel in the Mideast or England in the Falklands, or Princess Di's new princiepoo in *Disneyland!* He leaps to his flat feet to join the dancing jam in front of the bandstand. The dancers give him room. The band shifts into "Truckin' " by the Grateful Dead. Everybody in the place under 40 knows the song and joins in the chorus, "Sometime the lights are shinin' on me. Other times I can barely see...," and the dancing dressmaker from Queens is carrying the standard for everybody over 40.

He takes off his sportscoat without missing a step. Tosses it to his sister. Unbuttons his arrow short-sleeve and lets it fall from his skinny shoulders, head back, arms out, Tevye today, with his fiddler on the far north American roof ... and when his shirt finally falls it reveals to the roar of all a T-shirt printed across the pitiful chest and the proud little gut in bright blue calligraphy:

"I may not be perfect but parts of me are excellent."

Dancing and puffing with his head thrown back and the crowd beating time with their hands.

"Lately it occurs to me ... what a lon-n-g-g strange trip it's been." ■



STEWART BRAND

Kesey's writing desk on the Oregon coast —fog, waves, wind, words.

Rachelann A Remembrance

by Leo Dreu

IT HARDLY MATTERS that she was plain; matters not at all since we were, both of us, plain in those far ago days, she in her kick pleats and ribbons, me in my Eisenhowers.

True, there was the freckle I didn't like but there were the powder blue eyes which I did – very much. The smile, too, was pleasing, I think: a wry, tight-lipped little smile, extremely sensual for one so obviously pure. And, of course, there was the laugh like bowling balls knocking at the door, a guffaw but oddly welcome.

Rachelann. It was all one word like that – no second capital, no hyphen, but deliberately Rachelann, meant to be spoken full in one breath like a Nat King Cole song or an edict.

To say she was a throwback is to understate the case. Certainly she predated Lou Ann Curry, the first and only girl whose books I would carry home. She had not Lou Ann's Catholic school-uniformed plumpness or orange trampoline curls that bounced whenever she walked, had not the kewpie Irish smile of pretty Brenda McKenzie who waltzed with me at the Cadet Officer's Ball. No, Rachelann was Victorian, hers a life of cameo and lace, the sort of squeaky-clean, bookish girl-next-door girl so mythically abundant in the 1930s yet very nearly a cultural impossibility in that butterfly-and-blue-jean decade known to us as the 1960s which is why I now suppose I consider myself lucky to have known her.

I deny accusations I was drawn to her simply because she was easy to be with and washed with Camay. More than for what she was, I needed her for what she was not.

They were not years I had been reared for, the 1960s. Typically Catholic, I had been weaned on a doctrine of eternal hell for a fib to father or for a piece of meat eaten on a Friday. Imagine, then, my little boy's concept of punishment when applying this same crew-cut theology to, say, the Tet offensive or the Berkeley awakening. The whole world, or so it appeared, had given itself over to Satan and I was in no way about to trade in my tuna salad salvation for a bayonet for anyone. Against war and the whiffs of change, I had only a little, silver star to hold on to placed upon my forehead by the Sisters of Notre Dame. Back then, emerging from a world which promoted Julie Andrews and Sleeping Beauty, a world I more than believed in, that star seemed to me enough – and then some.

RACHELANN was the ideal counterpart to this innocence of estrangement; she had studied ballet and was learning to sew when first we met (pursuits found unacceptable among the female population of her her day).

In an age of curiosity, Rachelann remained curiously aloof, a princess in a tower who suspected little, if anything, of what the rest of the world was up to. It hardly fazed her that, all around, her peers were speaking differently from her; she did not understand so-called hippie jargon and never expressed a moment's interest in caring to. If she could not close her ears to what was said, to so-and-so describing a friend as "burned out" or so-and-so describing a song as a number that "really cooked," she could, in fact, close her eyes and would petulantly pass off these, to her, foreign expressions as little else than proof positive of what she termed the "arsonistic tendencies"of a counterculture drinking and drugging its way toward eventual oblivion.

Very little sixties substance made its way through her turret window. Amidst it all, she continued a cultivation of proper ways and clung to her own special language of standards. If there was a friend with whom she had, perhaps, become suddenly disenchanted, she would explain the situation regally, eyes lowered, and in a barely tolerant posture whisper, "M has fallen out of my good graces." Inferiors (those found to be lacking in strong I.Q.'s and style) were quickly dismissed as "fudgeheads" and individuals considered by her to be particularly offensive (and there were many) were invariably set aside as "sorry cups of tea."

This archaism, this self-immersion in a thought and a manner more becoming to a turn-of-the-century

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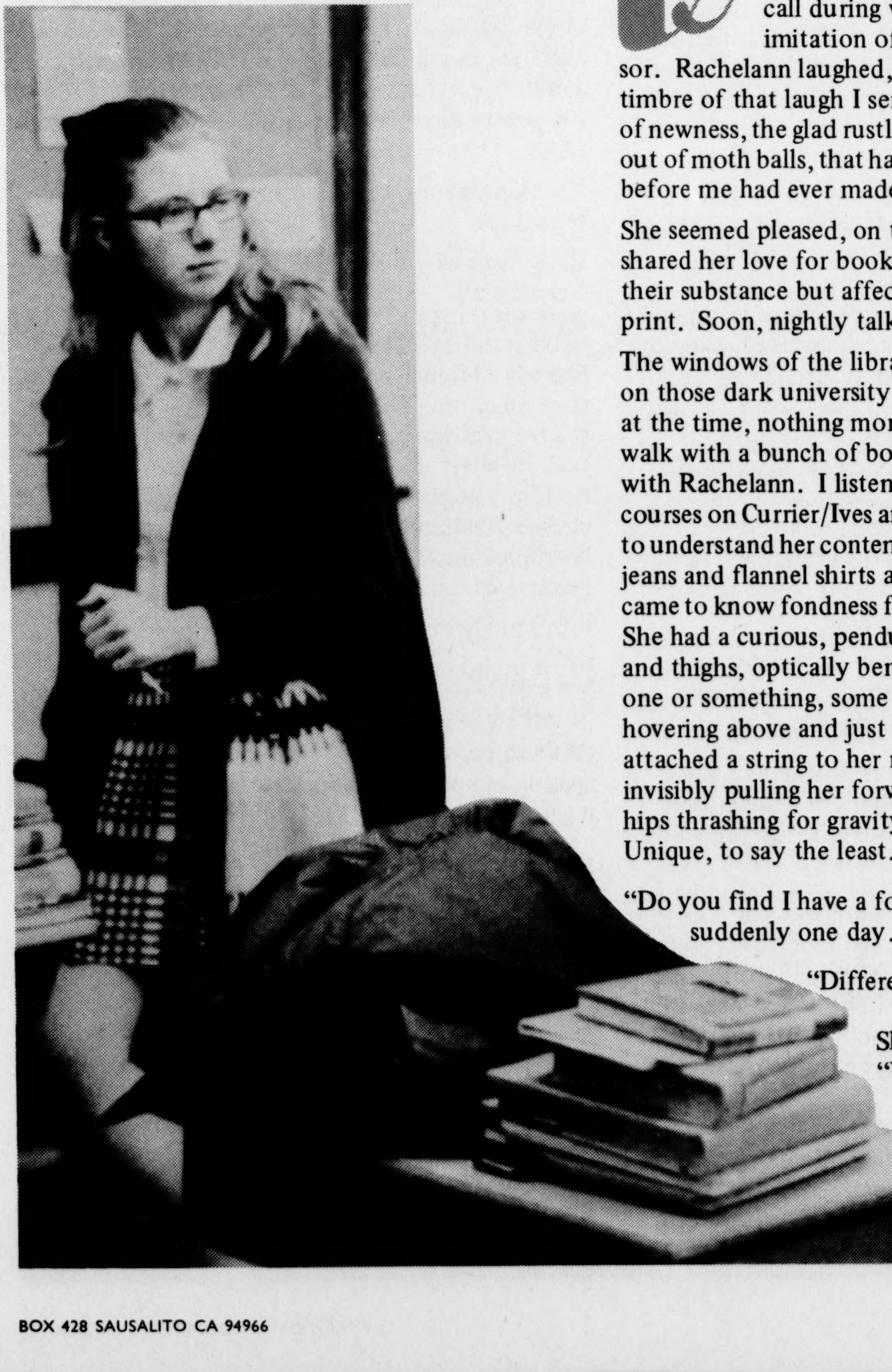
We see writing dealing with the decade of the 1960s fairly often, and I'm never sure if it's because of the history of this magazine or that the period is now at a sufficient focal length to allow for introspection. This story impressed me with its language and a celebration of quiet differences. Leo Dreu lives in Lowell, Massachusetts. *–Richard Nilsen* spinster, was the result (or so insisted her mother from whom she might well have taken lessons in charm and accessibility) of "too little socializing and too much Amy Lowell." And while there was daily evidence that she had, indeed, deliberately raised herself in an atmosphere which no longer held any basis in fact, leaving her the brunt of many an acneed tease, there were also those times when it became more than apparent that her behavior stemmed, too, from some hidden line of anger, a self-pity coupled with genuine fear (and this fear *was* justified, her concept of a rock group being the Lettermen) that culture had scheduled a change of costume and that she, in the wings, had been left a character no one had bothered to tell.

But meekness, charity, intellect; these, too, were dear to her ways and many, put off at first by what they saw in her as economy of emotion, were later anesthetized, even charmed by her devotion to a combination pragmatic/romantic sensibility, an attitude of order and balance possessed of the tranquillity of mathematics, the near-perfect alignment of plaid. Vatican II, fallen heroes, Magical Mystery Tours, mothers burying their sons; each and others of these were either beneath her comment or beyond her ken. And yet, in her awful isolation, she seemed somehow (or so I could pretend) the only Dutch boy for miles around with an eye on the dike and a finger at the ready. Old-fashioned though they were – a reverent passion for the history of manners, a health for time, an insistence for roses – her oddities were lovely, and because they were so very out of their element, they lent respect to sentimentality and created for me (dare I say recreated?) the clearest illusion of a simpler age.



WHERE IT BEGAN, I think I can say. Memory serves up a weekend phone call during which I ventured a merry imitation of a favorite Classics professor. Rachelann laughed, and somewhere in the timbre of that laugh I sensed something, a trickle of newness, the glad rustle of old coats being shaken out of moth balls, that had my ego thinking no one before me had ever made her laugh.

She seemed pleased, on the other end, that I shared her love for books, affection not only for their substance but affection for bound paper print. Soon, nightly talks turned to nightly strolls.

The windows of the library would be orange for us on those dark university evenings. There seemed, at the time, nothing more wholly satisfying than a walk with a bunch of books under arm and a chat with Rachelann. I listened intently to her discourses on Currier/Ives and museums, tried mightily to understand her contempt for the myths of faded jeans and flannel shirts and, welcome wonder, even came to know fondness for her slightly comic walk. She had a curious, pendular walk, a dancer's build and thighs, optically bent at the belly as if someone or something, some devilish sprite perhaps, hovering above and just to the front of her, had attached a string to her navel and was forever invisibly pulling her forward, feet at right angles, hips thrashing for gravity in three-quarter time. Unique, to say the least.

"Do you find I have a foolish gait?" she asked me suddenly one day.

"Different, not foolish," I answered.

She nodded approvingly. "You're the first one who hasn't made fun. Actually, I'm quite proud of my walk. It comes from long hours spent at the barre."

"I see," I said.

She stopped. "And you mean to say you find it not revolting? Even my double ankles?"

"Even those." I smiled.

Her freckle did a little dance. "It's time you met my folks," she said.

"I'm not pretty anymore. It's a simple, declarative sentence. The toe shoes were a dream."

MOST OF OUR TIME was spent in the family kitchen with Rachelann's mother, Woodrow, and her younger brother, Lee. Oh, yes – and with Mittens and Snoopy, the dogs. A father figured somewhere in all of this but he was one of those dinosaur daddies in whose presence one always felt imminent the discussion of a dowry and whom one avoided as often as possible.

I favored most the time spent in the kitchen. I like kitchens, particularly "Meet Me in Saint Louis" kitchens where the emphasis on patterns and windows stage the sun and where, in any corner, you are likely to taste the smell of poppy seeds and licorice that make you feel good and safe and warm, only it isn't really poppy seeds or licorice at all you are smelling but ordinary things – dough and apples and sugar – wrongly identified by our fostered belief that only the exotic could ever make us feel so very much at home.

I became, I think I can tell you, surrounded as I was by piping bowls of bisque, kindly words, and fluttery mothers, quite the pampered suitor. Woodrow baked oven cookies served with watermelon slices on the side while Lee, he of a choirboy's face and demeanor, fashioned a white knick-knack shelf as a gift for me one Christmas.

On Saturdays, the three of us, Rachelann, her brother and I, passed our noons at a downtown Woolworth's where you could still buy sun-gold canaries and carry home angelfish in a bag. We broke balloons for penny sundaes and laughed and had a swell time.

Our dates defied the times we were living in. On the eve of the Beatles' break-up, I remember, we attended an Arthur Fiedler concert and heard the Boston Pops play *Clair de Lune* and *Selections from South Pacific*. Rachelann wore a hand-made, floor-length gown; I wore Old Spice cologne.

The week Betty Friedan's picture appeared on the cover of **Time**, we visited Amherst and Dickinson's grave. We were translating Ovid's "The Founding of Rome" during the Washington Watergate trials. We took long sojourns on campus, mostly, sitting on cold, grey, autumn rocks and letting our feet feed on the leaves. Conversations went something like this:

"Do you ever miss the ballet?" I would say.

"Naturally not. I have you."

"What I mean is – am I enough?"

Rachelann would close her eyes. "It is only right and proper that we should have found one another. We are practical and live by certain laws."

"What laws?"

"Societal laws. The protocol of courtship. You respect me and I want to keep house for you. It's what's done. Not like the dance. The dance turned my head, put me up on a cloud. I was pretty then. I wore banana curls and tiny bows. I liked the dance. I liked the way I looked practicing in the mirror with the tulle stiff and obedient in a circle 'round my middle." She would here pause and look me in the eye. "You didn't know I know I'm not pretty anymore, did you? Well, I do. I'm not pretty anymore. It's a simple, declarative sentence. The toe shoes were a dream."

"Nothing wrong with wanting something better," I would say.

Rachelann would shrug it off. "I used to think I was special."

"What happened?"

She would fold her hands upon her lap. "The world laughed at me. It hurt at first but it's supposed to. It's for growing up. Oh, these Harpies with the bells on their ankles, they make a lot of noise but nothing's going to come of it. Not a thing. It isn't clean, what they're doing. They don't see the order. A simple faith, a tidy kitchen. You follow the rules because it's all you can do."

"And honeymoon at Niagara, I suppose?"

"Just as did our Mothers and Dads."

"I want to be safe," I would say.

"And safe you shall be," she would answer and motion me permission to kiss her apple cheek. We anticipated marriage.

I WOKE ONE MORNING hating her.

News of a friend killed in Cambodia took me like a fever, carried me to a funeral that became, for me, a birth.

Questions began to be asked of me: "What about *your* draft card number?" "What's your opinion of the Berrigans?" "Were you there at the protest on the ninth?"

I stirred as if from a long, lazy sleep. Like anyone existing in a time machine, encased, secure, I had forgotten there was a world beyond not able to tolerate my game. I had not hidden well. Belief in my invisibility had served to make me all the more opaque. Terrified, angry, I panicked. In my guilt and naked tardiness, I blamed Rachelann, the shadow from the past, the princess in the tower. Sanctimonious! Phony! Ancient! Prude! What name didn't I call her? Not to her face, no, but in my heart, in the part of me that wanted to belong. To her face, I mumbled excuses and let slip curses sotto voce regarding "laws" and "absolute propriety." I wanted out.

"What can I do?" I asked a friend, begging a solution. "She will take me away from my time."

I promised the stars I would change.

The 1960s ended the morning after I discovered they existed.

BUT THE 1960s ended the morning after I discovered they existed.

I quit my job on impulse and boarded a Greyhound for the West. I didn't know where I was headed or what, specifically, I expected to find there. I was empty and alien and sought my fill of highways and revolution. Little did I know that what I sought had long since vanished.

No one spoke of "The Movement" anymore, at least not to me. There were people who looked like hippies, all colors and hair, but the few I struck up conversations with talked of two and three kids and of IBM.

A Dutch girl, pretty and plain in denim, sat with me for awhile. She, too, she said, had never made it to the Woodstock Festival, though she had tried. She offered me granola and went on tenderly about the Kennedys, Jack and Bobby. She had brought flowers with her, asters, to place upon their graves and longed to sit in on a rally.

Fond of making the peace sign, she did not understand when fellow passengers saw this and sneered. Janis Joplin was her idol, she said, and Oakland, her destination.

We heard and saw nothing of those years, though, of which we spoke. Disco music blared from the bus radio and the scenery outside consisted of working silos and general stores. Everywhere, workmen were busy covering over the polemics of sixties graffiti with false brick front and latex. Protest and change had passed to nostalgia. At one point, a guy at the back of the bus raised three cheers for Dylan but got petered, lazy response. The Dutch girl cried. It was an echo of the way the world had been then.

"When and if I ever do give myself, it will have to be to a man who will accept the fact that I and my kind do not want to change."

I STAYED ON ONLY a night in San Francisco, buying a return ticket home the next dawn. The first thing I did, upon my arrival, was to write to Rachelann. I explained everything as best I could and apologized for running away. My sudden departure I blamed on her father, travel fever, schizophrenia, amnesia and an overwhelming sense of history. I prayed she would forgive.

She would not. Several days later, I received the following reply:

L,

You are a talented boy and I think you will go far. I bear you no ill will and wish you the best life has to offer.

However, there is no doubting that your bestial abandonment on the night of the 18th has lowered you considerably in my sights. Surely you must know you have fallen out of our good graces.

Perchance, the error was mine. I might have given more of myself. When and if I ever do give myself, I realize now it will have to be to a much more mature and understanding man, one who will accept the fact that I and my kind do not want to change.

Really, it all worked out for the best and since we never truly tasted one another's thoughts, we shall never know what we missed. It's best you forget.

Never call or write me again. We shall meet at the place where the sea meets the sky.

Placidly,
Rachelann

Ignoring her requests, I mailed more letters, even dialed her once but she calmly refused a talk with me. I never heard from or saw her again.

For the sea never really meets the sky. Mutual friends tell me Rachelann retains to this day the hair style she favored as a girl. The shelf her brother made me still hangs from my bedroom wall only now it hangs crooked and yellowed and is losing its capacity for holding. ■

RECYCLING NOW

by Peter Warshall, Dan Knapp, J. Baldwin, and Art Kleiner

YEAH, WE'RE DREDGING this old subject up again — partly because the new technologies described herein need responding to, partly because some new books and resources are available, and partly because ignoring the trash problem is more inexcusable than ever (as shown in "Deforestation in Disguise," page 12 of this issue).

Personally, this survey brings back my high school days, when I managed the messiest recycling center (ultimately condemned by our town hall) in the Hudson Valley. So I'm disappointed that most solid-waste management publications are so tedious to slog through. They don't match the feeling of waking on a cold Saturday morning, bundling up in overcoat and heavy boots, and going out to jump up and down in large drums of empty bottles, hearing the bursts of shattering glass underfoot. Don't recyclers want people to realize that dealing with garbage can be fun?

On the other hand, dealing with garbage is usually a constant, depressingly tedious chore, best fit for the anal-retentive. (We did spend hours hand-clipping metal rings off the bottles before we got to jump on them.) These books provide motivation, understanding, and at least a few techniques to make the job easier. Our resident expert on personal ecological practice, Peter Warshall, called on his "man at the dump," scholarly scavenger Dan Knapp, for evaluative help. Peter's suggestions were often out of print or replaced by new stuff, so I ended up rewriting some of his reviews. J. Baldwin turned in his opinions separately. We all contradict each other somewhat, but you can salvage the right approach for you from our differences. —Art Kleiner

WE START MODESTLY. This is not access to the 1700 million tons of mining waste: tailings, gob piles, smelter slag, washing rejects or bauxite red muds. This is not access to toxics: heavy metals, radioactive leftovers, flammable and explosive byproducts or food-chained synthetic organics like PCBs. We modestly try to navigate you toward reuse of the 4.5 billion tons of city garbage (including abandoned automobiles); the 3.1 billion tons of industrial trash (packaging, cafeteria throw-aways, office supplies and process wastes), and the 24 billion tons of organics (feedlot manure, human sludge, forestry discards, dumped silage). It is a political world as chaotic as a city dump. If you know of more enlightening books, tools, and organizations, we welcome help. It is time to make a concerted effort to unravel the waste knot. It was time 40 years ago when Americans patriotically recycled their garbage to aid the war effort.

The recent American solution to reusing "wastes" is a technology that wastes even more. Instead of encouraging separation of wastes at home, recent government grants have gone toward developing energy-intensive, expensive machines with many breakable parts which sort garbage after collection from the home. These centralized separators use magnets, shredders, and electrostatic and air-jet sorters to duplicate the miracle of human eye-hand coordination.

Source separation — the labor-intensive separation of cans, glass, paper, and other recyclables at home — is the common-sense solution to solid-waste pollution. Some communities use divided garbage trucks to pick up already sorted trash at home. There are problems, of course, especially with organization, rip-off scavengers, market pricing, and education. But source separation minimizes garbage collection and disposal costs, extends the life of landfills, reduces petroleum consumption, maximizes self-reliance, and conserves irreplaceable natural resources. —Peter Warshall

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Operating a Recycling Program

Written by the editors of **Resource Recycling** *magazine, this booklet unravels the waste knot. It's a competent, detailed, unique how-to manual for starting and running community recycling centers. The* **EPA** *has only fifty free copies left before it goes out of print, but the authors hope to revise and reprint it themselves eventually. For information on that and a list of state recycling associations, send a self-addressed, stamped envelope to* **Resource Recycling** *(reviewed later in this survey).*

—Art Kleiner
[Suggested by Peter Warshall]

Operating a Recycling Program
(A Citizen's Guide)
Kevin Mulligan and
Jerry Powell
1979; 96 pp.

free from:
Office of Solid Waste
U.S. Environmental
Protection Agency
401 M Street SW
Washington, DC 20460

Garbage Reincarnation, Inc.

An uncompromising group of community recycling researchers. Their publications include: **Garbage-to-Energy: the False Panacea** *(***NWEC** *p. 314), which first documented the centralized garbage-sorter scam;* **Garbage Reincarnation,** *a manual for school classrooms on recycling which, says Peter Warshall, is "the gem at the bottom of the trash heap and, like all great 'activity' books for kids, a book every adult will secretly learn tons from, with a great bibliography"; and* **Recycling Mixed Waste Paper into Innovative Products,** *which suggests what to do with "unrecyclable" papers — slick magazines, lightweight packaging, etc. — which make up 15-25% of the municipal waste stream. They can be made (industrially) into fake firelogs, animal bedding, and construction board. Anyone serious about recycling should know about these peoples' work.* —*Art Kleiner*

[Suggested by Peter Warshall]

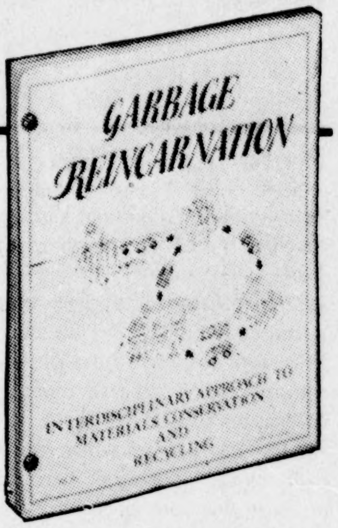
Garbage Reincarnation, Inc.
publications list
free (with self-addressed, stamped envelope)

Garbage-to-Energy: the False Panacea
1979;
$5 postpaid

Garbage Reincarnation
1980;
$5.95 postpaid

Recycling Mixed Waste Paper
1982;
$7.95 postpaid

all from:
Garbage Reincarnation, Inc.
Sonoma County Community Recycling Center
P.O. Box 1375
Santa Rosa, CA 95402


GARBAGE REINCARNATION
INTERDISCIPLINARY APPROACH TO MATERIALS CONSERVATION AND RECYCLING

National Recycling News

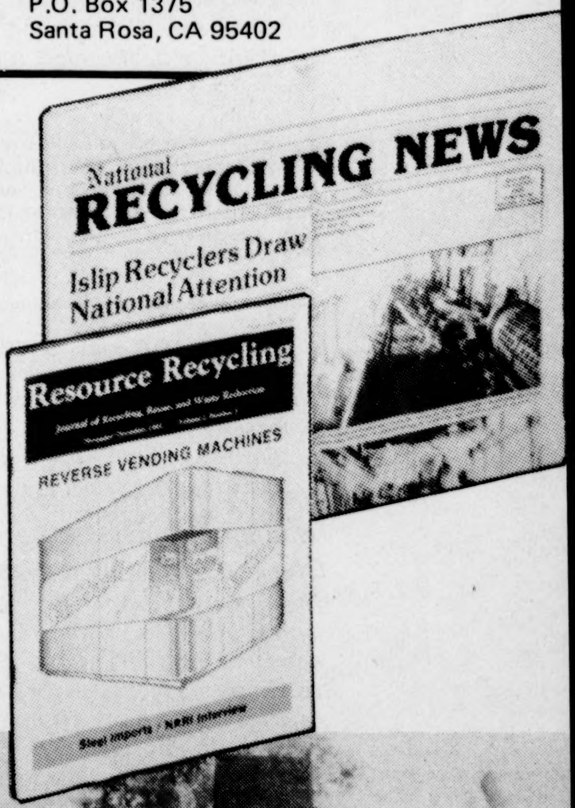
Resource Recycling

National Recycling News, *says Peter Warshall, is "the newsletter of the only national recycling advocacy group, a coalition of industries, environmentalists, labor, government, and local recyclers. Has a thriving information center on contacts, how-to guides, state groups, and educational materials. Join. Scavenge their info. Recover your garbage."* **Resource Recycling** *is similarly useful, maybe a bit more high-tech, with a good list of recent publications in each issue. They don't compete, they complement; in fact, they may be sending each other free to their own subscribers soon.* —*Art Kleiner*

[Suggested by Peter Warshall]

National Recycling News
Tim McClure, Editor
$20/year (4 issues; includes membership in National Recycling Coalition)
from:
National Recycling Coalition
P.O. Box 472
Breckenridge, CO 80424

Resource Recycling
Jerry Powell, Editor
$18/year (6 issues)
from:
Resource Recycling
P.O. Box 10540
Portland, OR 97210


National RECYCLING NEWS
Islip Recyclers Draw National Attention
Resource Recycling
REVERSE VENDING MACHINES

•

Approximately 2.5 billion gallons of lubricating oil is sold in America each year, 1.2 billion gallons for automobile use (60% to do-it-yourselfers), and the remaining 1.3 billion gallons for industrial use. Not all of this oil is recoverable: for example, about 35% of automotive oil is lost through leaks, consumption, and during oil changes, and about half of industrial oil is lost. . . .

The real problem in increasing waste oil recycling up to now has been getting the oil (especially the 60% from do-it-yourselfers) collected so that the re-refining industry could process and market it. This is where oil recovery programs in the states come into play. . . .

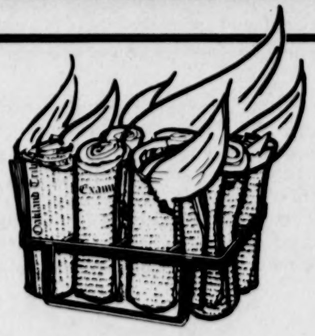
For information on establishing an oil recycling program, request the "Used Oil Recycling Kit" (DOE/CS-0015) from the U.S. Department of Energy, Technical Information Center, P.O. Box 62, Oak Ridge, TN 37830. For the name of your state used oil coordinator, contact Don Eastep, NAORC, 325 West Adams Street, Springfield, Il 62706. —**National Recycling News**

Separated Discard Carrier being filled by municipal workers in Bloomfield, New Jersey. Front of truck accepts separated recyclables, the rear is conventional compactor for non-recyclable trash. —National Recycling News

Paper-Grate

Burn newspapers in your fireplace with this simple rack. No need to fool around with one of those tiresome roller-uppers either. Someone else will have to decide about whether or not there are harmful heavy metals in newspaper smoke. (I've read that all but the color pages are OK.) The thing seems to work well enough. —J. Baldwin

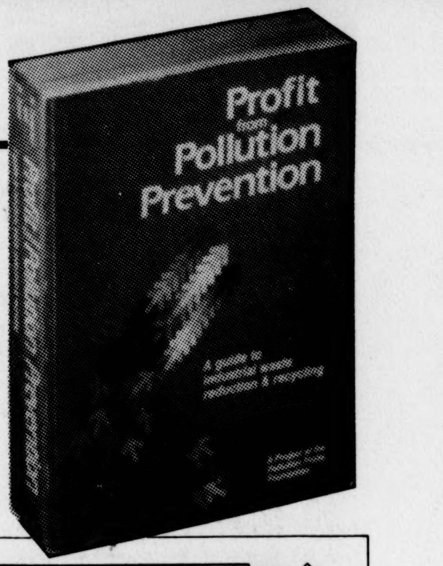
Paper-Grate
$24.95 postpaid
from:
Wilfred George
16 Bonita Avenue
Piedmont, CA 94611



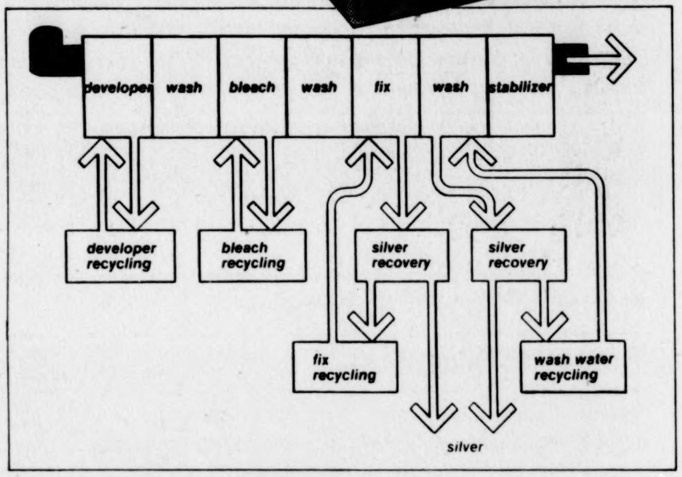
Profit from Pollution Prevention

Bucky Fuller has been saying for years that pollution is just good stuff in the wrong place at the wrong time. This Canadian book offers hard evidence that not only can many pollutants be controlled but that the control can produce income. Experience has proven over and over that without economic incentive, polluters won't do much. Turns out that even with economic incentives, they won't be much inclined to do much until convinced. This book is an attempt to convince. A host of common industrial polluting materials and practices are examined and the possible alleviation tactics discussed. For many nasties, successful case studies are presented. Failures, which in my experience are out there too, are not talked about much, but then this is intended to convince folks to do better, so maybe a bit of proselytizing is in order. You'll get a real education on the subject if you read the whole thing. You'll also have to translate some of the bureaucratic functions to U.S.A. terms, but the principles hold true. If you need to deal with a polluter, this book should be included in your homework.

—J. Baldwin


Profit from Pollution Prevention
A guide to industrial waste reduction & recycling

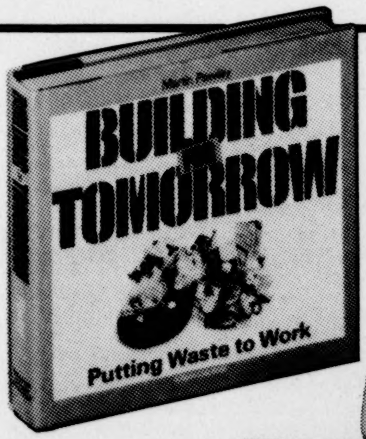
Profit from Pollution Prevention
Monica E. Campbell and
William M. Glenn
1982; 404 pp.
$25 postpaid from:
Firefly Books
3520 Pharmacy Avenue
Unit 1-C
Scarborough, Ontario
Canada M1W 2T8



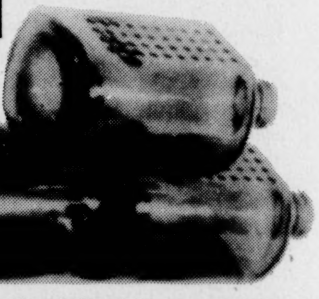
Recycling Potential in Photo Processing. Commercially available recycling equipment exists that makes it possible to re-use spent developer, bleach, bleach-fix and fix process solutions. Equipment is also available to recover the dilute amounts of silver present in the washwater after the fix bath.

Building for Tomorrow

Now that we've seen that guilt and simplistic tactics (such as local recycling) don't work very well to alleviate the problems of waste, what next? This provocative book suggests that our society is no more "unnatural" than much of what goes on in nature, and that we can learn from the study of natural systems. Citing many convincing examples, the author brings his arguments to an interesting conclusion: We must design for reuse so that "waste" isn't anything less than a resource that needs no more energy added to be useful. Example: Heineken beer once commissioned a design for a beer bottle that could be used, as is, as a brick. If most industrial output was designed with this spirit, our waste problems would be greatly alleviated, and society better served. Certainly, something like this is what's going to happen. We'll soon have no choice. *—J. Baldwin*



Building for Tomorrow
Martin Pawley
1982; 192 pp.
$19.70 postpaid from:
Sierra Club Books
2034 Fillmore Street
San Francisco, CA 94115
or Whole Earth
Bookstore

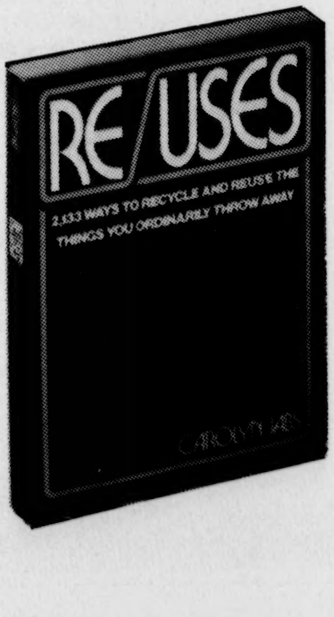


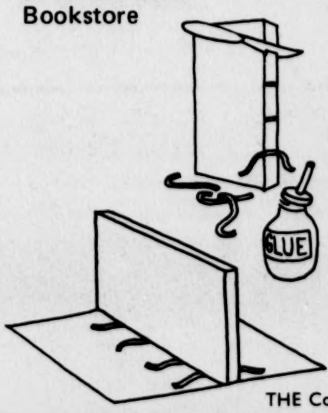
Twenty years ago Alfred Heineken conceived a modest project to develop a beer bottle designed to become a brick in the wall of a house after its contents had been drunk. The first brick-bottle designs were interlocking and self-aligning, but were rejected by Heineken's marketing people as too "ugly" or "feminine" in appearance. The final version, shown here, is interlocking but, unlike earlier versions, it requires mortar and is laid on its side, where it is weakest.

Re/Uses

By far the most fun of the home recycling books, and the most starry-eyed. J. Baldwin rejected it as "hippie-dip"; homesteader and recycling extremist Dick Fugett found some suggestions in it that he's now planning to use. It's an encyclopedia of methods for adapting household and community wastes to new uses. Sometimes the reuses seem farfetched or ugly (do you really want a lamp made of tin cans?) but often enough they're ingenious and practical. If you have space and time to deal with your personal garbage in detail, this is your best manual. Kudos, too, for the nice design and clear writing. *—Art Kleiner*

Re/Uses
Carolyn Jabs
1982; 182 pp.
$11.45 postpaid from:
Crown Publishers
One Park Avenue
New York, NY 10016
or Whole Earth
Bookstore


RE/USES
2,133 WAYS TO RECYCLE AND REUSE THE THINGS YOU ORDINARILY THROW AWAY
CAROLYN JABS



If you find yourself throwing out favorite paperbacks because their pages are falling out, try this trick for holding them together. Line up all the pages and hold them in place with wood clamps. Use a coping saw to cut ¼-inch slits about 1½ inches apart in the spine of the book. Cut short lengths of string, press them into the slits, and dribble white glue in after them. Allow the glue to dry before covering the spine with a strip of cardboard.

DUMPSTER COOKERY

"Road Kills" for Vegetarians

JAY KINNEY

by Dianna Preston

I OFTEN PERFORM a minor miracle in our kitchen: the transformation of garbage into garbáge (rhymes with garage). My produce comes from the contents of the garbage cans at the little Zen grocery around the corner. Spoilage to them, "spoils" to us.

Lettuce rehydration

Limp, wilted lettuce leaves can be rejuvenated. We soak them in a sink full of water for nearly an hour. They absorb it through all their surfaces and use it as a structural element to become as crisp and fresh-looking as is possible for a lettuce leaf to be. Other vegetables, too – zucchini, bell pepper, celery, snow peas, spinach – can all do the same trick, with wonderful results. Of course, parts that are really spoiled have to be surgically removed, but we use the good parts in salads, soups, stir-fries, omelettes, pizza, huevos rancheros. . .

The stock option

Everything that isn't quite good enough to keep but not exactly spoiled either goes into the stock pot (everything except the brassicas – cabbage, brussels sprouts, broccoli and cauliflower – which have to be used cautiously because they have strong flavors). Onion and garlic skins are good. So are carrot ends, zucchini ends, egg shells, bread crumbs, biscuit dough that you scrape off the breadboard – anything foodlike and unspoiled.

Use the stock in hundreds of ways as additions to other things you're making.

Or you can make it into good soup all by itself by adding vegies that you've stir-fried in oil with plenty of soy sauce. Use lots of onions, or even only onions. Herbs like basil or oregano are good here, too, and so is miso.

Green garbage soup

Lettuce or spinach not quite good enough for salad can just go into the stock. But if you cook them and whir them in the blender, you can make a delicious cream-of-green soup. Grate onions into butter (or oil) and fry a bit. Add enough flour (we use whole wheat) to make a paste and stir in milk, just like a "white" sauce. Add the whirred greens, salt plenty and put in some herbs and maybe a little sherry. Thin to souplikeness with more milk (a good use for powdered milk) or some stock. It turns out like a terrific "cream of spinach" soup, even if you use lettuce.

Fruit everything

But the best part of garbáge cookery is the fruit. Take off the bad parts and eat what you want. Maybe make a little *jugo*: milk in a blender with honey, any or all kinds of fruit (especially good with a little lemon and rind), and ice cubes.

Cut up the rest, and put into a bowl with some honey (or white death – much cheaper). Let it set overnight or for a few hours.

Then come the choices. You can freeze it as is for *jugos* or eating. Or cook it down. Some stages are wonderful for adding to yogurt, some for pie or pastries, some for over ice cream, and if you cook it down far enough it turns into preserves or, with smaller pieces, jam. Free, wholesome, and the best I've ever tasted.

Here's our favorite pastry recipe:

Line the bottom of something with a pie crust or biscuit dough. Spread well-thickened garbáge over it and add whatever strikes your fancy: nothing, cinnamon, coconut, currants, or ? Make a crumb topping by mixing about a cup of flour with ¾ cup of brown sugar (apologies) and cutting in ½ cup of butter until it forms pea-sized lumps. You can add chopped nutmeats to this, too. Spread it thickly over the garbáge and bake at 400° for 12 or so minutes, till the edges start looking dark. This is my favorite food.

Besides saving us bunches of money (you know what they *charge* for pure, honey-sweetened jam? – a lot of ours is organically grown, too) and giving us good times in the kitchen, not to mention the plentitude of gastronomic delights for us and our friends, garbage resurrection affords us the great satisfaction of taking that which is unloved, cast aside as unfit, the marred, the imperfect, and giving it a destiny perhaps even greater than that of some of its other, more fortunate brethren.

You know what would happen if people really got into this, said I one day? There wouldn't be enough garbage to go around. Sounds healthy, doesn't it? – most of the good food being thrown out no longer wasted. ■

The messy, thrown-out food in grocery dumpsters has never been described more delectably than here. Those who stomached the free meat of "Road Kills" (NWEC p. 362) have probably been waiting ever since for some such advice for scoring free vegetables as a side dish. Chef Dianna Preston, who helped typeset the **Next Whole Earth Catalog**, *has since moved to Los Angeles, where the dumpster pickings are presumably plentiful.* *–Art Kleiner*

Helping Health Workers Learn

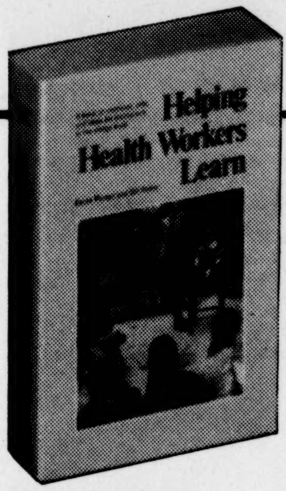
One of the oldest and most interesting of U.S.-based self-care programs is the Hesperian Foundation in Palo Alto, California. For the past 17 years foundation director David Werner and co-workers have supported a self-sufficient villager-operated health program in Ajoya, a small, remote village high in the mountains of western Mexico.

After many years the villagers paid them the highest possible tribute: they explained that they were now ready to run things on their own and asked the outsiders to leave. It is a measure of Werner and colleagues' approach to self-care that they were delighted. The villagers now run the program entirely on their own.

In recent years the Hesperian folks have focused on providing written materials that support self-care education programs. In 1977 they published Werner's pioneering self-care text, **Where There Is No Doctor** *(NWEC p. 326), a Mexican villager's guide to basic medical skills. Now Werner and Bill Bower have produced a second, equally remarkable volume,* **Helping Health Workers Learn.** *The "health workers" of the title are not doctors and nurses, but village health workers — laypeople with a special interest and calling for working with health problems, laypeople who are natural helpers. But there is much in this volume for professional health workers to learn.*

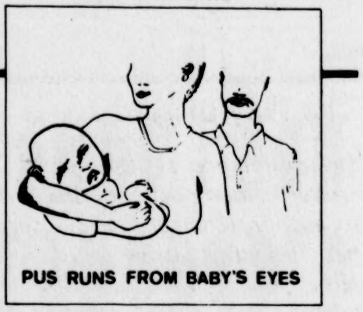
Helping Health Workers Learn *is one of the few books on health education that face up to this major problem: most health-education programs increase layfolks' dependence on all-powerful professionals and undermine peoples' sense of their own abilities to take care of themselves. The authors clearly recognize that one of the biggest obstacles to self-responsibility in health is the unwillingness of professionals to let go of control.*

This may be the best available guide to putting together a self-care program. —*Tom Ferguson, M.D.*

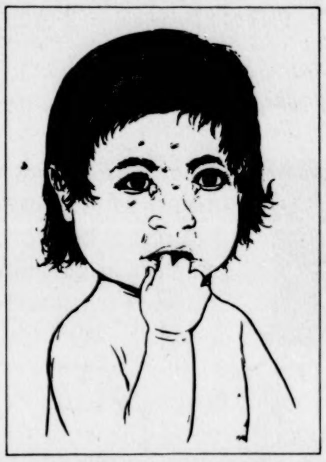


Helping Health Workers Learn
David Werner and
Bill Bower
1982; 640 pp.
$8.50 postpaid from:
Hesperian Foundation
P.O. Box 1692
Palo Alto, CA 94302
or Whole Earth
Bookstore

LESS APPROPRIATE


PUS RUNS FROM BABY'S EYES

MORE APPROPRIATE



The top picture, from a World Health Organization manual for the primary health worker, fails to communicate what it is supposed to. Readers will first notice the baby's ugly, oversized head, his twisted ear, or the ink on the mother's elbow. Even the baby's eye problem is not recognizable. It must be spelled out.

Notice also that the parents have mouths, but lack eyes and brains. What does this tell you about how the authors of the manual view villagers or poor persons?

The bottom picture, from a flipchart called "Las Moscas" ("The Flies"), was produced in Peru by the Summer Institute of Linguistics and the Ministry of Education. It, too, shows a child with puss running from her eyes. But here the child looks real. Anyone looking at the drawing notices the eye problem at once — because when people are real, we look first into their eyes.

Free Yourself From Pain

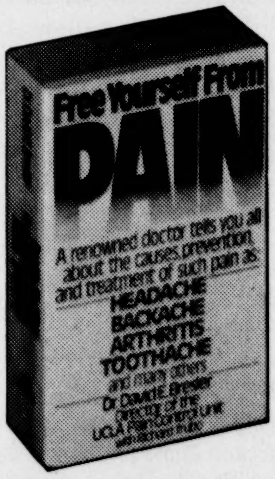
Fortunately, I've never really suffered pain. In childbirth, yes, and as an aftermath of surgery, but not the chronic debilitating pain that permeates one's whole life. **Free Yourself From Pain** *was written by Dr. Bresler, Director of the UCLA Pain Control Unit, for those people who have been searching for relief from the pain of arthritis, headache, back pain, and many other dysfunctional conditions. What is most important about this book is that readers are encouraged to draw upon their own inner resources to help overcome their pain. While drugs and surgery do have their place, they are deemphasized in favor of alternative therapies such as acupuncture and biofeedback.*

The first half of the book discusses what pain is and provides exercises to pinpoint exactly why one may hurt. Not overlooked is that a certain type of personality — a "pain person" — does exist and that giving up one's pain may also mean giving up its secondary benefits (sympathy, avoidance of work, etc.).

For those who really do wish to alleviate their pain and live a normal life, **Free Yourself From Pain** *offers good suggestions. In addition to the traditional and non-traditional therapies, Dr. Bresler stresses the importance of good nutrition, laughter, using mental imagery, and listening to one's inner advisor as methods of coping with and overcoming pain. The most significant message of this book is that pain relief lies not in a magic pill administered by a physician but in taking responsibility for one's own life and exploring the many paths to pain control.*

—*Rochelle Schmalz*
Planetree Health Resource Center

Free Yourself From Pain
David E. Bresler, M.D.
1979; 479 pp.
$10.95 postpaid from:
Simon and Schuster
Attn: Mail Order
1230 Avenue of the Americas
New York, NY 10020
or Whole Earth
Bookstore


Free Yourself From PAIN
A renowned doctor tells you all about the causes, prevention, and treatment of such pain as:
HEADACHE
BACKACHE
ARTHRITIS
TOOTHACHE
and many others
Dr. David E. Bresler
Director of the UCLA Pain Control Unit

●

There is also growing evidence that some alternative modalities may work — not because of their own direct action — but by causing the nervous system to release its own natural painkiller. Endorphins, for instance, may hold the secret to how acupuncture works. Research by Dr. Bruce Pomeranz and his associates at the University of Toronto seems to indicate that acupuncture stimulates the nervous system to secrete endorphins, which in turn suppress pain. In addition, endorphins may be responsible for the pain relief which occurs following the administration of placebos (inactive substances). . . .

We have found at UCLA that alternative pain-alleviation techniques are often less effective for patients who chronically use opiate-based analgesics. If you're taking Demerol or Darvon, procedures like acupuncture or guided imagery may not provide much relief. Why? Well, particularly with acupuncture, I think the problem may be that the endorphin receptors become desensitized due to long-term use of large doses of narcotics.

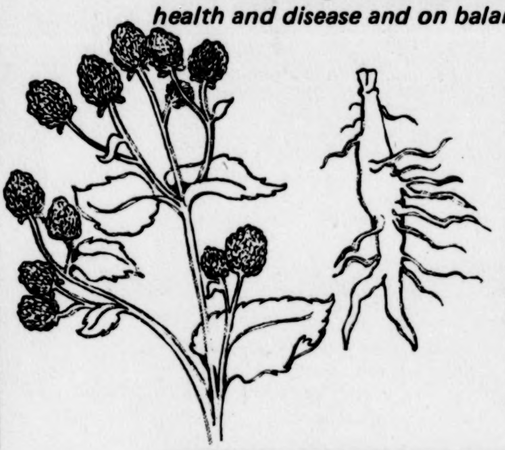
The Way of Herbs

The Way of Herbs
Michael Tierra, C.A., N.D.
1980; 230 pp.
$6.95 postpaid from:
Orenda/Unity Press
235 Hoover Road
Santa Cruz, CA 95065

Several features set this lyrical and scientific book apart from the many other herbal medicine books. Foremost is its author, Michael Tierra, a certified acupuncturist who has studied extensively with American Indian, Chinese, Hindu, and western herbalists. He is a practicing herbalist who doesn't just list a multitude of properties under each herb but gives specific dosages as well as the principles behind choosing among herbs of similar healing action. He also limits himself to informative accounts of 130 herbs including 17 of the most important Chinese herbs. The emphasis is on teaching the principles rather than encyclopedic knowledge.

There are thoughtful discussions on the philosophy of health and disease and on balanced diet ("the essential key to all successful healing"), as well as chapters on diagnosis, methods of application, and obtaining and storing herbs. The book is specific and authoritative enough to be of use to health practitioners in addition to individuals interested in self-care. —Pierre Gremaud

[Suggested by Tom Ferguson, M.D.]

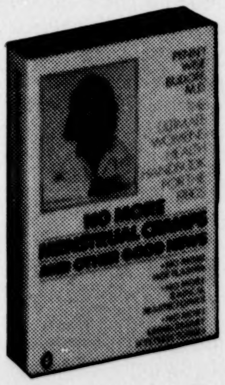


Burdock (Arcitum lappa) is an excellent remedy for all skin diseases, taken alone or with other blood purifiers such as sarsaparilla. Make a decoction of the root using one ounce to one and one-half pints of water and simmer until the volume is reduced to one pint. Take one-half cup, three times daily. For sweating, simmer covered for ten minutes and drink one cup of the tea before taking a hot bath.

No More Menstrual Cramps and Other Good News

Dr. Budoff is a family practice doctor and a university professor, with mainly professional women as patients. After years of medical practice it dawned on her that the medical establishment essentially ignored basic needs of female health care, so she set out to research possible solutions to neglected problems and to make the results of her research available to as many women as she could. All the latest developments in preventive self-care and dealing with menstrual cramps, premenstrual complaints, cancer of the breast, uterus, and ovaries, contraception, VD, vaginitis, and menopause are in this book. Her style is readable and personal, while remaining medically accurate and not too condescending. —Ruth Williamson

No More Menstrual Cramps and Other Good News
Penny Wise Budoff, M.D.
1981; 312 pp.
$5.70 postpaid from:
Penguin Books
299 Murray Hill Parkway
East Rutherford, NJ 07073
or Whole Earth Bookstore



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Women do not have menstrual cramps because they are hysterical, but because they have five times the amount of prostaglandin as women who are relatively symptom-free. At last there is something that can be documented that shows a physiological difference between the fortunate women who do not suffer, and those who do. . . .

Drugs that inhibit prostaglandin activity are currently being evaluated. Flunalgan (flufenamic acid), an Israeli drug, has the ability to neutralize prostaglandin, as well as to prevent its continued synthesis. It abolished the symptoms of dysmenorrhea in 100 percent of the women to whom it was given. Drugs available in this country include Indocin (indomethacin), which is normally used to treat arthritis. This drug also works as a prostaglandin inhibitor.

Current Medical Diagnosis & Treatment

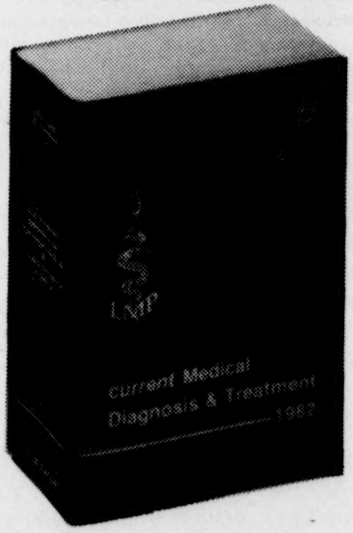
This is probably the single most useful medical reference book you can own. With it you can do two things: you can begin to understand your illness or injury, and — more important perhaps — you can decide whether your doctor understands it. Is your doctor current? Has she (he) diagnosed and treated your condition according to the latest medical research? Here's where you find out.

Being the book doctors use, it's dense and comprehensive, and takes a little work from the lay reader. It's absolutely worth the effort. It's updated every year and offers not just diagnosis of almost every known medical malady from dandruff through toenail atrophy but also prognosis (how long it'll last), standard treatment, and short bibliographies for further research. It's the most used book at Planetree Health Resource Center.

(Keep in mind, though, that **CMD** *is a standard reference, very much rooted in AMA-style medicine. Hence you'll find recommended such therapies as shock treatment and tranquilizers).* —Joe Kane

[Suggested by Planetree]

Current Medical Diagnosis & Treatment
Marcus Krup, M.D., and
Milton J. Chatton, M.D.
1983; 1113 pp.
$25.56 postpaid from:
Lange Medical Publications
Drawer L
Los Altos, CA 94022



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Herpes Simplex (Cold or Fever Sore)

Treatment

For persistent or severe, recurrent herpes:
A. General Measures: Eliminate precipitating agents when possible. L-Lysine, 1 g daily by mouth for 6 months, then 0.5 g daily for 6 months, has been reported to diminish the severity and frequency of recurrent herpes simplex. It is available as Enisyl 334-mg tablets.

B. Local Measures: Apply a moistened styptic pencil several times daily to abort lesions. Zinc sulface solution, 0.025-0.05%, may be used as a warm compress, 10 minutes twice daily. Or one may apply epinephrine, 1:100 solution, frequently. Topical corticosteroids are contraindicated. Applied topically, toluidine blue has an anesthetic effect and appears to hasten drying of vesicles.

If there is associated cellulitis and lymphadenitis, apply cool compresses. Treat stomatitis with water and milk of magnesia mouthwashes.

Idoxuridine, 5% in DMSO (not available in the USA) is somewhat effective topically.

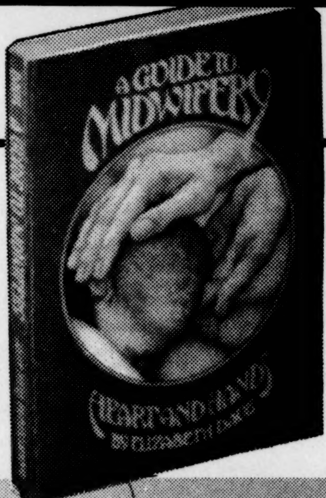
A Guide to Midwifery

This is certainly a good introductory book for beginning or aspiring midwives and one which seriously practicing midwives will like and learn from also. It's also a great book for parents-to-be, as it lets you know what is going on and what to expect — from a home or hospital birth. It deals with some pregnancy and birth situations which few other books mention — those of single mothers, gay women, older women, separated couples. A sensitive, holistic approach to pregnancy, birth and after — but with an assuring matter-of-fact scientific undertone. The thing I love the very most about this book are the wonderfully fine drawings. I've never seen anything to compare with them. They are beautifully done and show so clearly techniques, maneuvers and just how the baby fits within the pregnant woman. Nice photos, too. Some interesting insights on what it means to be a midwife and how it affects your personal life. —Jeanne Finan

•

For the woman who has really found her way with labor, the moments of delivery are a time of total concentration, all-faculty focusing. Intensity builds in second stage until sensation is continual (baby's head and body in the vagina, putting constant pressure on the nerve endings), and so overwhelming are her feelings that the mother generally surrenders her own body image to a certain super awareness of her *baby's* form. This is an ultimate spiritual and sensual experience of union, merging . . . the orgasm of delivery. A woman with such attunement can easily effect her own delivery with grace and good timing.

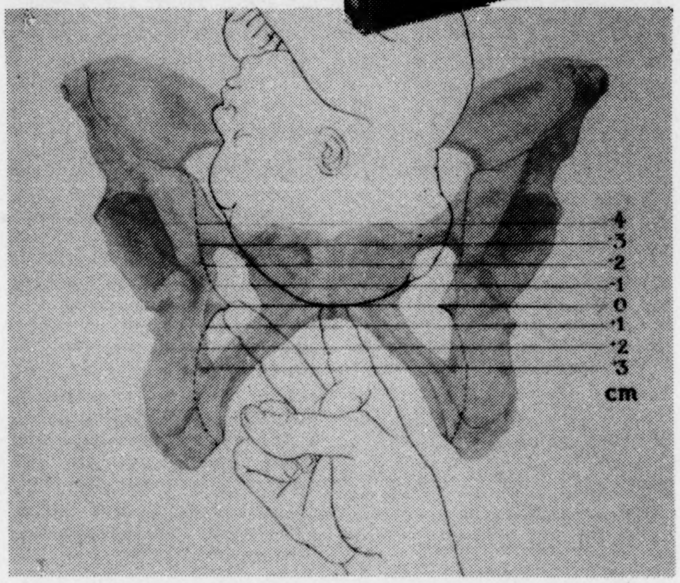
There are some women who cannot easily surrender to so much sensation and fight to control it all, and others who simply won't stand for it and insist on pushing indiscriminately. These women should be warned about their likelihood of tearing, and should then be guided to reach down and feel the baby's head with the skin stretched all around it. Often this brings a sign or moan of surrender as connection with the baby finally occurs, and delivery usually follows soon after.



A Guide to Midwifery
(Heart and Hands)
Elizabeth Davis
1981; 216 pp.

$10.50 postpaid from:
John Muir Publications
P.O. Box 613
Santa Fe, NM 87501

or Whole Earth
Bookstore



Checking for station is difficult for beginners. It's essential to have some clinical experience with pelvimetry to be certain you can find the spines. The easiest way to check is to insert two fingers about an inch, move both directly to the left and locate the spine, and then scissor your fingers by leaving the lower one on the spine while pointing the top one toward the back of the vagina and presenting part. Try to keep that top "reaching" finger on the same level plane as the "spine" one, and then lift it either up or down as necessary to find the tip-top of the head. Make a mental note of approximately how many centimeters up or down you move your finger, and you have your reading. After a while, station is more or less a qualitative sense of how well the head has filled the pelvis, and it's no longer such a mysterious and painstaking procedure.

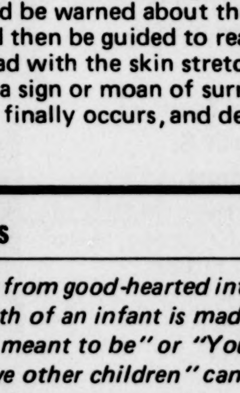
When Pregnancy Fails

Too often, usually stemming from good-hearted intentions of offering comfort, the death of an infant is made light of — comments like "It was meant to be" or "You're young — you can always have other children" can hurt deeply. Here's a book to make us more sensitive, a book of shared experiences from many parents whose infants have died — during pregnancy, at birth, or shortly thereafter. It's also a book with some unique information — a chapter which talks of the feelings of single mothers who have had babies who have died, a chapter which deals with the feelings of grandparents, a chapter on prenatal diagnosis which results in an unwanted abortion. Good appendices, too, with listings of local support groups and other organizations that offer support and information. Extremely thorough, sensitive information for coping with and moving through the crisis of a baby's death.
—Jeanne Finan

When Pregnancy Fails
Susan Borg and
Judith Lasker
1981; 224 pp.

$8.45 postpaid from:
Beacon Press
c/o Harper and Row
Keystone Industrial Park
Scranton, PA 18512

or Whole Earth
Bookstore



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The focus on the mother's psychological problems appears particularly in studies of repeated miscarriage. The women who experience this terrible situation are described as rejecting their femininity, being hostile toward their mothers, or unconsciously wishing not to have children. These explanations are particularly cruel in light of the growing evidence of environmental and medical reasons for miscarriage. They also sometimes ignore the fact that the miscarriages themselves may have psychological effects on the women and those effects might be wrongly interpreted as causes.

•

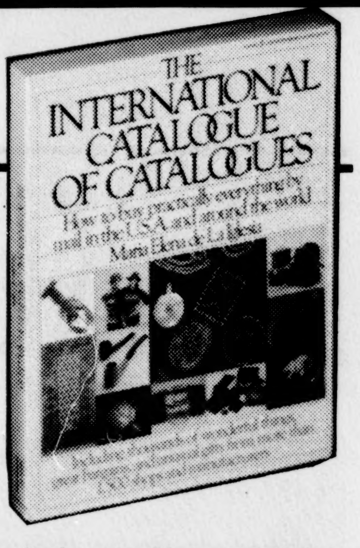
One location where the exposure of pregnant women to dangerous substances has produced considerable controversy is the workplace. With an increasing number of women working and our growing awareness of occupational hazards, employers have sought to reduce their liability for dead and deformed infants by excluding women of childbearing age from certain kinds of jobs. Some women have responded by undergoing sterilization to keep their jobs or by suing to protect their rights to equal employment and to a safe workplace.

What employers have failed to respond to is the growing evidence that fetal death and deformity can also be caused by exposure of the fathers to dangerous work environments. . . . One study is especially dramatic in demonstrating this common effect: of thirty-two pregnancies begun by the wives of a group of male lead workers studied, eleven ended in miscarriage, one in stillbirth, and thirteen in infant death. Only two children survived to adulthood.

The International Catalogue of Catalogues

Most mail-order catalog directories either don't annotate their listings or, worse, annotate them boringly. There's a limit to how much a writer can find new to say about the five hundredth identical dealer of yarn, electronics, art supplies, shoes, or whatever. Unfortunately, without a well-written and well-researched listing, you don't know what you're sending for. This book is meticulously written and researched, tempting, discriminating, and more comprehensive than we are without being too overbearing. It's more mainstream than us too — we'd probably never review antiques or household frills. But I covet this lady's skill at finding and describing sources of mail-order books and clothes. She's been tracking this subject for more than ten years. *—Art Kleiner*

The International Catalogue of Catalogues
Maria Elena de La Iglesia
1982; 255 pp.
$12.45 postpaid from:
Harper and Row
Keystone Industrial Park
Scranton, PA 18512
or Whole Earth
Bookstore


THE
INTERNATIONAL
CATALOGUE
OF CATALOGUES
How to buy practically everything by mail in the U.S.A. and around the world
Maria Elena de La Iglesia

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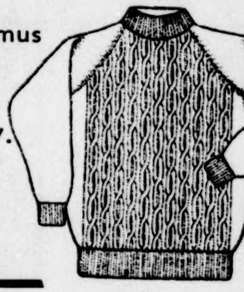
Crowley Cheese, Healdville, VT 05147
Telephone (802) 259 2340

Leaflet, free U.S. and overseas. MC, V.
The Crowley family has been making cheese for sale since 1824, and have occupied their current factory since 1882. Their natural Colby cheese is still made according to the old Vermont process, cutting and raking the curds by hand and using old-fashioned crank presses. The result is that Crowley Cheddar bears little resemblance to store-bought cheese. It comes in three- and five-pound wheels, mild, medium or sharp, and is very highly recommended. All sorts of cheese lovers consider it Vermont's best.

●

Muileann Beag a' Chrotall, The Old School House, Camus Chros, Isle of Skye IV43 8QR, Scotland
Telephone 047 13 271

Leaflet and wool shade card, free; air mail $1. MC, V. Muileann Beag a' Chrotail (the Little Crotal Mill) uses traditional Hebridean patterns to make sweaters with wool from island sheep, and has even reproduced the colors that the crofters used when they did their own spinning and dyeing. About $40 each.



Rocsport shoes

Beyond bartender shoes. Last issue I enthused over the Adidas referee shoes as something great because they incorporated running shoe technology without looking ridiculous. They look black and leathery and well made, and that's why bartenders and waiters wear them.

But there's something even better (and at about the same price, circa $50). Rocsports have the same advantages of wonderful lightness and sensible look, and in addition they are far more comfortable and offer a few different styles. As remarked by the first suggestor (there have been a multitude), Brian Toss at **WoodenBoat**, *they're like a Volvo with a Porsche engine — very comfy, very very fast. Since I got a pair I practically sleep in them.*

Of the several mail-order houses handling Rocsports, Norm Thompson has so far the best prices and most variety.
—Stewart Brand
[Suggested by Brian Toss]

Rocsport shoes
$50 (approx.)
Check your local
shoe store
Norm Thompson
Catalog
free from:
Norm Thompson, Inc.
P.O. Box 3999
Portland, OR 97208

Kotatsu can kill

Austin Meredith, author of "Devolution" (p. 36) told us that the kotatsu fuel-saving home-heating method, which we reviewed in the Winter 1982 CQ, can be extremely dangerous. He said kotatsu is identical to the "korsi" system he saw used in Iran. Both sit people under low tables placed over wood, charcoal, or electric burners that give off heat under the table. The wood and charcoal burners also give off carbon monoxide. Carbon monoxide poisoning, Austin said, turns its victims' corpses a bright red color because it ties oxygen to hemoglobin and prevents it from being released into the body tissues.

"The peasant families in Iran and Afghanistan who use this korsi device live in well-ventilated homes quite unlike typical U.S. homes," he wrote. "They have the benefit of tradition; they've seen Grandma set up this heater hundreds of times. They know how to grind up the charcoal and wet it and shape it into fist-sized balls and let these balls dry. They know these balls of charcoal-powder must be lighted outdoors, never indoors, and they know how to put the balls into a wire-mesh cage and whirl them around their heads until they are glowing brightly all over, with no black spots at all. They know to let the charcoal cover itself with a white ash all over, before bringing it indoors, and they know to regulate the heat by covering the balls partially with ashes from the brazier. They use special stiff, thick, airtight padded quilts which might char if in contact with flame but would never burn — and these heavy quilts simply are not available in the U.S."

So I called the wood-burning-kotatsu makers, the Japanese-American Elk Valley Folks, and they agreed. "None of our wood-burning kotatsus are in typical U.S. homes,' " said Elk Valley member Bob Jacobs. "We installed them in yurts and teepees. Even in Japan charcoal Kotatsu are only found in the countryside — partly because of the wood shortage. Japan city dwellers use electric kotatsus. Also, we insist on home made charcoal. Store-bought charcoal has chemical additives — it's guaranteed to kill you."

The Elk Valley Folks are designing an electric kotatsu system that will be cheaper than the one we listed from Soko Hardware, and they'll also provide information on wood-burning kotatsus, but only for use in well-ventilated houses with homemade charcoal. If you are building your own wood-burning kotatsu, contact them first for safety information at P.O. Box 968, Upper Lake, CA 95485. Don't use it in an unventilated building. *—Art Kleiner*

Welcome to CQ Lite/CQ Bold

At first, **CQ** *Lite subscribers may think there are eight page numbers missing between this page and the next one (page 96). That's because those articles ("More Texas Crude" and "Sexus Revisited") are only being printed in* **CQ**'s *Bold edition. Both editions include the regular 152 other pages (including classifieds) of this issue.*
—Art Kleiner

SEXUS REVISITED

by Pheno Barbidol *Drawing by Melinda Gebbie*

LAMBO'S
Wa
Melinda Gebbie

"What does a woman want?"
—Freud

1.

I can't say you didn't warn me about your shitty soul. It's just that I didn't realize the extent to which fermentation had taken place, embalming you in a kind of raison d'etre. How can I argue with your opinion of yourself? So maybe you did fuck me good. So what? I've been fucked that good before. It'll happen again. And never mind about that overwhelming sensation like a bowl of jello quaking in my belly when you spread my legs on the clean sheet. Misinterpretation. From hunger, from a long bout with chastity and loneliness, I mistook lust for kindness. Elan for rapport. Miscreance for good faith. Forgive my stupidity.

2.

What was it I heard you say in a dream? Oh yes. "Come here. Go away. Come here. Go away." This is the neo-modern man's love mantra. His cautious approach to "romance" (excuse the obscenity . . .) is a road block on an already muddied highway. Baby, you're not so rare! You fit the mold to perfection, and you should be proud. Another handsome American boy schooled in the fine art of sexual innuendo as subtle as the primitive beat of the jungle drum. So go fuck your best friend's wife. Go hang her silky garters from the nearest chandelier. "An experience I've never had," you told me coyly in the lingerie shop, pointing discreetly to a black lace get up. This on the heels of "You're gonna find out about my shitty soul," should have warned me. But I've never believed in hazard signals. I often run red lights.

3.

Just for the record, there are a few things I'd like to know. For instance, that day we met in the deli, was it true (as you claimed later) that you were more interested in your ham and cheese on rye than the tempting curve of my bosom? And tell me again what you said when Vic nodded toward my table and said, "I wouldn't kick her out of bed!" Where did I go wrong? Wasn't I bitchy enough? Wasn't I playful enough? Tall enough? Smart enough? Tight enough? Don't you remember in the night putting your arm over my body when a street noise startled us out of sleep? Don't you remember shielding me from the light as you dressed for work the following morning at dawn? ("It's early, angel, go back to sleep . . ." you said, pulling the comforter gently up over my naked shoulders.) Don't you remember how we came together and came together, ("Come baby! Come!" A command. A plea. Your back arched and straining as I licked the silver beads of perspiration from your nose, your chin, your mouth.) and I thought I would never again feel anything as lovely as your warm tongue flicking between my lips.

4.

And now . . . h-e-r-e-'s . . . MAMA(!) toting her purchases in a worn out Saks' bag as she wanders the shopping malls of Long Island while her pubescent sonny child sits at home waiting for the evening land to slip out from under him. Mama instinctively stops to peruse Halston at the cosmetic counter; Gucci in the specialty department; Cartier behind bars. Middle Class America's ongoing vocabulary: name brands, top labels, designer products. A kind of religion guaranteed to elevate its parishioners above the quagmire of mediocrity. Now I know how you were able to so quickly identify the barely visible pieces of luggage on that episode of DALLAS: "Oh, she's so-o-o cool with her Vuitton baggage," you told me sarcastically, reaching across the bed to click off the set.

5.

It was as though he had thoroughly studied my body (making mental notes of the vulnerable regions) before embarking on actual contact with it. ("The first time I saw you I wanted to take you home and throw you on the bed!") His mouth and hands made slow, careful journeys over my skin. His legs were simultaneously insistent and gentle as they moved on and against me. His tongue mellifluously fluttered across my nipples. Wherever he touched me a small fire flared beneath the surface of the skin. Once he looked up to say: "It's good to get lost like this," and then, as I began to tremble, he stopped to ask if I was alright. "I'm fine," I lied, urging him to continue. I knew then that I would be the one

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A broadside from the urban front of the war between the genders. Pheno Barbidol is the alter ego of a somewhat published woman poet (no further details for reasons of anonymity), a source for **San Francisco Chronicle** *columnist Herb Caen, and a fixture on the Bay Area art show opening circuit.* *—Art Kleiner* *getting lost while he remained confident and aloof, perhaps only feigning abandon. I would be lost not only to the sight, sound, touch and smell of him, but also to the unreasonable dream of expectation starting to take root. I knew it would be suicidal to blame anything as simple as lust for the surrender he evoked, so I convinced myself — as he entered me for the first time — that it was a kind of euthanasia being committed, and not murder.*

6.

"I am slowly dying," you said, smiling sadly, "The marrow in my bones is vanishing. Soon I will be as pliable as jelly." And then you took me wandering down Market Street to a hot dog joint, where, over french fries and cokes, your mood suddenly changed and you asked me questions like: Did I think of myself more the Oscar Wilde type of writer than, say, Jane Austen, because I did madcap things with my time rather than perfecting the art of discipline in my work? And I thought, *What is this cocktail party talk crap!* That evening before the real cocktail party, after we made love for the first time, you were lost in thought. *Probably cooking up more chic banter,* I laughed to myself. "You make me feel like a teenager on a first date," you told me later in the rambling Maybeck house when we had taken our glasses of Scotch into the library to snoop through our hostess's books. And when you finally ran out of snappy repartee, when we had run the gamut of congenial conversation from discussions of topics as varied as nuclear power and Liz Taylor's latest exploits, you said it was time to go home. "Sometimes I hate the way I sound when I talk to people at parties," you told me as we drove across the Bay Bridge. *He's running out of things to say to me,* I thought as the liquor began to wear off. *He's shot his wad. Soon he will be completely mute. Soon, very soon, he will be deaf.*

7.

For a few moments earlier in the day they had stood at a flower stall on Powell Street where she bought him red carnations wrapped in translucent blue paper. "This is the color of my heart," she said teasingly, gently lifting one of the flowers to her nose. "I like to think of it as being this color," he responded, touching the fragile wrapping. Once again she got a whiff of the Mediterranean as he inadvertently brushed his fingers against her cheek. "Maybe it is blue, with red trim like the border of fine writing paper," she proposed. Evidently this was a suggestion he could accept, so he smiled. She took his hand and, raising it to her mouth, slowly ran her tongue along the surface of his palm. (He tasted like soap and not like the sea.) He stood quite still — the expression on his face a mixture of awe and disapproval — as though watching a scene in a movie. Apparently nonplussed by her unabashed show of public passion, he drew his hand away and put his arm around her waist, pulling her towards him. The bulk of flowers managed to keep their chests from touching, so he playfully kissed the tip of her nose, took her hand and started toward the Metro station. I will never get closer than this, *she told herself resolutely, noting the elegance and ease with which he guided her through the turnstyle. (The same unselfconscious grace which he had displayed the night before when she sat on the edge of the bed and watched him dress for the party and he had casually slipped a rose silk shirt over his jeans, looking as if he'd just stepped out of a high gloss photo in a fashion magazine.) Even in bed I will always be maneuvered (as I am being maneuvered now). There will always be a chasm to keep us from totally connecting. "What I want to learn from you is how to pull off your particular brand of freedom," he had told her an hour before and she had felt powerful. But now she doubted the sincerity of this remark. Its motivation was suspect. She realized the possibility of double entendre in "how to pull off." Suddenly it came to her, as they stood together on the crowded platform waiting for their train, that it was* she *who would learn* his *brand of freedom. She would be forced to anticipate the boundaries of space surrounding him. Before he had finished with her she would be as proficient at running his emotional obstacle course as a blind woman was at guessing the physical appearance of someone by using her hands. It was* she *who would stand outside waiting to be let in.*

8.

And so, sooner or later, Freud will turn up with his outrageous sadistic lyricism and proceed to reduce man to sexuality and the death instinct. Or maybe — since we're on the subject of souls — the Cartesians will appear, dancing precariously on the heads of pins, with all their medieval gobbledygook about the relation of soul to intellect, intellect to emotion, etc., etc., ad nauseam. Scholars would have us believe that Descartes' soul was incorruptible. His tongue lodged, no doubt, deep in the womb of reason. The soul, however, inquires, no matter how many layers of shit you bury it beneath. What does a *woman* want? Any other questions, lover? What's that? Silly boy! Yes, all the chickens do come home to roost, eventually. Count on it. ■

More Texas Crude

by Ken Weaver
Drawings by R. Crumb

Conversational Fragments

"If it harelips the governor. . . ."
1. No matter what the cost
2. Equals "come hell or high water . . . ," and implies an implacable determination to succeed in an endeavor, from working a crossword puzzle to finagling the purchase of a select oil lease, even if to do so constitutes a slap in the Face of the Law.
"I know she's married, and I know she loves her husband, and I know he's a big, mean, jealous man, but I'm gonna bed her if it harelips the governor!"

"Before I   , I couldn't spit over my chin. But now that I   , I can spit all over my chin."
1. This is a device used to demonstrate, albeit facetiously, how something, or someone, has brought about a radical improvement in the quality of one's life. The blanks can be filled in with whatever pleases you: "Before I joined the Moose Lodge, I couldn't . . . ." Or, "Before I met your mother, I couldn't spit over my chin, etc."

"That'd gag a maggot!"
1. Refers to something terminally disgusting.

A Texican Lexicon

to domino
1. To give birth, to bear a child.
"How's the wife?"
"Oh, she's fixin' to domino here about March or April."

whipout
1. Money
"Got any whipout?"
"My new pickup cost me nine thousand whipout."

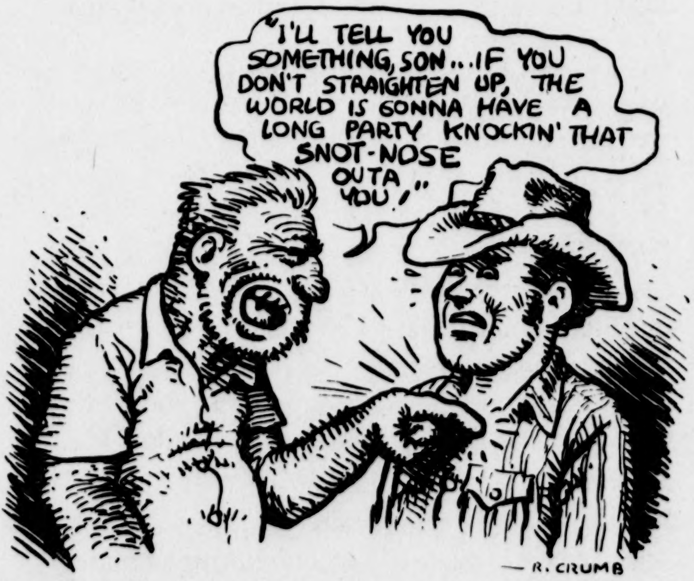
graderblade
1. A face, pretty or otherwise.
"Would you look at the graderblade on that new barmaid?"

fawnching
1. Complaining, sulking.
"Boy, you see that yard out there? Well that's my yard. Now, you see that grass all over my yard? That's your grass. I want you to quit fawnchin' around this house and get out there and get your grass off my yard, 'cause it ain't gettin' anything but higher, and I ain't gettin' anything but madder."

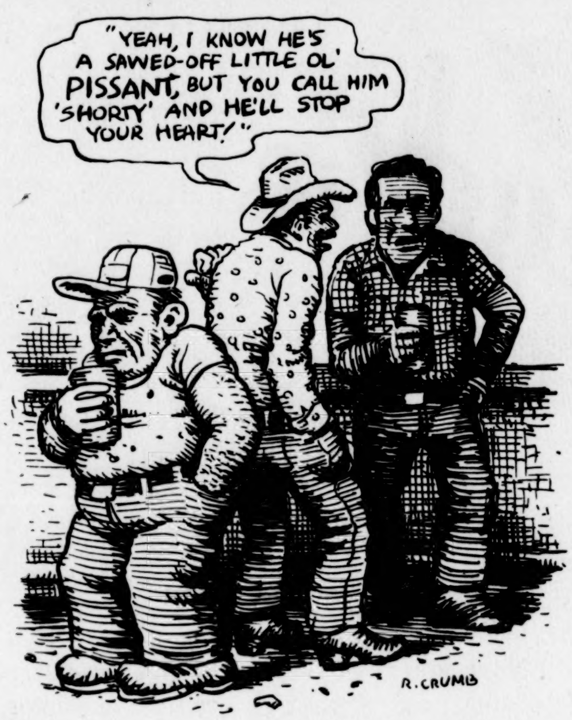
stump-broke
1. Unquestionably obedient. A "stump-broke" mule is a mule which has been trained to back up to, and stand before a stump for purposes of passive sexual intercourse.
"What's wrong with my nose? I'll tell you what's wrong with my nose. I asked Gunther if he had his girl-friend stump-broke yet, and he hit me on it, that's what."

tricycle motor
1. A child. Also: house-ape, crumb-cruncher, curtain-climber, rug-rat and yard-ape.

snot-nose
1. Arrogance.
"I'll tell you something, son. If you don't straighten up, the world is gonna have a long party knockin' that snot-nose outa you."


"I'LL TELL YOU SOMETHING, SON...IF YOU DON'T STRAIGHTEN UP, THE WORLD IS GONNA HAVE A LONG PARTY KNOCKIN' THAT SNOT-NOSE OUTA YOU."
— R. CRUMB

More from the unrefined pool of Lone Star talk first tapped by ex-Fug Ken Weaver in the Fall '82 CQ. He's got a book's-worth of this stuff looking for a publisher. Most of these crudities seem first spoken by men; women with crudities of their own, Texan or otherwise, are welcome to send them here. *—Art Kleiner*


"YEAH, I KNOW HE'S A SAWED-OFF LITTLE OL' PISSANT, BUT YOU CALL HIM 'SHORTY' AND HE'LL STOP YOUR HEART!"
R. CRUMB

pissant
1. Pejorative diminutive

mullygrubbing
1. Sulking, petulant behavior.
"So your sister Darlene runned off with a albino motorcycle gang president. Mullygrubbin' around the house ain't gonna help. Don't you worry, Tyshonda, we'll you find you somebody just as good!"

to split the sheets
1. To be separated or divorced.
"Me and the ol' lady split the sheets a year ago, and I'm growin' a toenail on my dick, from fuckin' my socks."

chingaladdo
1. Anglo pronunciation of *chingadero*, literally, *fucker*. Equates to *thingamajob, thingumbob, whatsis*, and whatchamacallits of this ilk.

Snakenavel
1. A fictitious city, usually said to be in Idaho. Used to give someone an idea of where you live. The wrong idea.
"I've been from Bumfuck, Egypt to Snakenavel, Idaho."

murdercycle
1. A motorcycle.

Roebuckers
1. Prosthetic dentures.

left-handed cigarette
1. Marijuana cigarette.
"I think that new guy's been smokin' some of that wacky backy. He just came over and asked me if Tuesday comes before or after November."

A Blue Tick-Plot cross bitch
1. A female cross-bred raccoon-hunting hound.

Beeshit
1. Honey
"She calls me 'beeshit,' 'cause I'm so sweet."

Wickerbill
1. Term of endearment.
"Lay down, you little wickerbill; I think I love you."

Henfruit, or cackleberries
1. Chicken eggs

. . . smooth . . .
1. An in-fixed adjective.
"My cousin took one look at his new-born baby boy and fainted smooth away."
"That city boy fucked smooth up when he started makin' fun of Shorty."

Horny . . . as a three-balled tomcat
1. Describes one who has an exaggerated second chakra, hyperfunctioning libido, or is in the throes of satyriasis.
"My cousin Aubrey's horny as a three-balled tomcat. He'd rather fuck than eat, and he's hungry *all* the time!"

Hungry . . . enough to eat the ass out of a menstruating skunk.
1. I'd rather die.

Slick . . . as two eels fuckin' in a bucket of snot.
1. Unseen but by the eye of the deranged mind.

Sticks . . . like shit to a blanket.
1. A truly existential stickiness, of which Sartre spoke.

Strong . . . enough to stick his finger up his ass and hold himself out at arm's length.
1. I'd pay a nickel to see that.

Stubborn . . . as a fly.
1. From the Spanish: *terco como una mosca*. A fly will land on your face a thousand times if for nothing else than the pleasure of waking you up from a dead drunk.

Sucks . . . like a bucket of ticks
1. Something, or someone, that "sucks" is of little value.
"This job sucks like a bucket of ticks."

Tough . . . as a Mexican family.
1. High toughness factor. Few social units have the solidarity of the Mexican family. If you fight one member, you have to fight them all, down to the last third cousin, twice removed.

Ugly . . . as Death backing out of a shithouse reading *Mad Magazine*
"Leon talks about his wife like she was Miss America, but I saw her in the Piggly Wiggly the other day, and let me tell you, that woman is as ugly as Death backing out of a shithouse reading **Mad Magazine** . . . ."

Wild . . . as a shithouse mouse
1. If you've ever stepped into a privy and found a mouse, you'll know how wild with fear a little mouse can become. With no exit but the hole in the seat, it's a dilemma no one, not even a mouse, should be faced with.

Scattered . . . like a madwoman's shit
1. Strewn about in great disorder.
"O.K.; you men're gonna have to clean up this tool room. You got tools and junk and good God there's a month-old half a samwich on your lathe! You got stuff scattered around here like a madwoman's shit!"

Boneyard
1. In the oilfield, usually a great rusting heap of barely usable old pipe connections, used for spare parts.

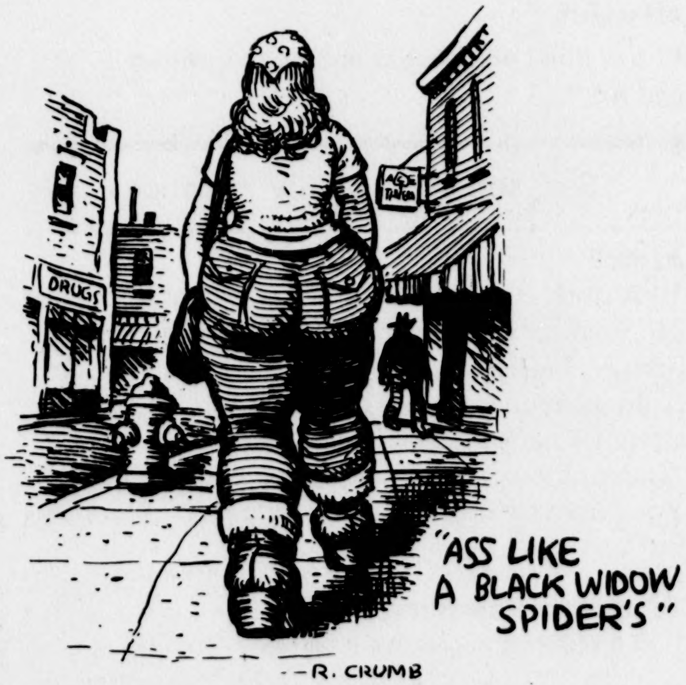
To grab another cog.
1. In the realm of the internal-combustion-powered vehicle, this means to shift to a lower gear, as when pulling a heavy load up a steep grade.

Stud duck (also: stud buzzard)
1. The acknowledged leader of a clique, or community.
"Sheriff Buckshot is the stud duck around here, and if he tells you a rooster can pull a freight train, you better get off the track."

Back when snakes used to walk
1. Once upon a time, long ago.

Eat up with the dumbass.
1. Consumed with stupidity.
"When I saw ol' Delbert tryin' to siphon gas uphill, I knew for sure he was eat up with the dumbass."

Hyperboles, Similes, etc.


DRUGS
"ASS LIKE A BLACK WIDOW SPIDER'S"
--R. CRUMB

Ass . . . like a black widow spider's.
1. Possessed of a Callipygian luxuriance, or a big ass.

Busy . . . as a cat in a feedlot.
1. A cat could spend all nine lives trying to bury that manure.

Crazy . . . as a football bat.

Dry . . . as a fish fart rolled in sand.

Fits . . . like a sock on a duck's nose.
1. With nary a wrinkle.
"That knit suit fits her like a sock on a duck's nose."

Grinnin' . . . like a cat eating shit out of a hairbrush.
"I remember back in the '50s when the whorehouse, the Chicken Ranch in La Grange, Texas, was in operation. One night me and Beaky and Toenails and Jim Bob went. I had got ten dollars from my Granny for my eighteenth birthday, so I spent five of it on what they called a 'short date.' And short it was: a regular 'wham, bam, thank you, Ma'am.' Anyway Jim Bob went in, lost his cherry, and when he walked back out to the car, he was grinnin' like a cat eatin' shit out of a hairbrush. I asked him what was so funny and he told us he's tore that gal a new one. He said she told him to put it in, and when he said it *was* in, she started hollerin' like he was killin' her!"

Happy . . . as a queer in Boy's Town.

Exclamations & Ejaculata

"I've seen a goat-roping, a fat stock show, and a duck fart under water, but if that don't beat any damn thing I've *ever* seen, I'll put in with you!!"
1. Indicates terminal astonishment on the part of the speaker. I heard it once (directed at me), when I walked into the El Campo, Texas, lodgehouse of the Benevolent and Protective Order of the Elk, No. 1402, in 1969. The fact that I had hair down to the middle of my back and looked like a cross between an ugly Viking and an orangutan may have had something to do with it.

"Boy?! Don't you call *me* 'Boy'! I got a yard of dick, a number two washtub full of balls, and enough hair on my ass to weave an Indian blanket, and you call me 'Boy'???"
1. If anybody ever calls you "Boy," you're ready.

"I don't give a national fuck!"
1. The speaker could not possibly care any less than he already doesn't.

A Selection of Handy Phrases Apropos of Violence

"They ought to put Chinese handcuffs on their dicks and let 'em fight it out."
1. This evokes a bizarre image, if you remember that Chinese handcuffs are those woven straw tubes into which your index fingers are inserted. The partial vacuum produced makes it impossible to remove your fingers without help.

". . . from asshole to appetite . . ."
1. From anus to gullet. This is where people

sometimes get cut, from . . . to, and mortally every time.
"He cut that sumbitch from asshole to appetite. Gutted him like a deer. God, he looked like a red canoe layin' there on the ground."

Wall-to-wall counseling
1. A physical beating given with the ultimate aim of redirecting the behavior of the beatee.

That Drinkin' Thing

"Whiskey when you're sick makes you well. Whiskey makes you sick when you're well."
1. If you can repeat the above couplet after two or three hours of quaffing cold ones, then have a few more and try again. Stop drinking when you can't repeat it correctly.

"I got a D.W.I. last week for not having enough blood in my alcohol stream."

"You don't buy beer, you rent it."
1. Reference to the short period of time you actually possess beer before it leaves you.

Knee-crawlin', snot-slingin' drunk
1. A severe degree of drunkenness, after enduring which all your friends feel compelled to give you reports on what you did, what you said to whom, and who's gunning for you.

CLUB
"IT'S GETTIN' DRUNK OUTSIDE..."

"It's gettin' drunk out(side)."
1. Means it's getting drunk inside the speaker.

"Fourteen Feathers"
1. Thunderbird wine, fourteen being the number of feathers on the wings of the bird on the label.

Cowboy cool
1. *Chambre*, room temperature, referring to beer. It's called "cowboy cool" even if the "room" is the trunk of a car on a hot summer day.
"I don't have any cold beers, but you're welcome to one of these if you don't mind it being cowboy cool."

Whiskey dents
1. Those irregularities, large and small, that you find in your car (or on your head) after a night at the shrine of Bacchus.
"He's got so many whiskey dents on his car, the fenders look like washboards."

Calf-slobber
1. Foam on a head of beer.
"I like to pour it into the glass real fast to get a good head of calf-slobber on it."

The bird
1. Austin Nichols' Wild Turkey Whiskey
"The Bird" is spoken of with reverence around the evening campfires of Texas "whiskophiles."
"I've never seen anybody that loved that ol' Bird as much as Jim Ed. When he buys a bottle, he just throws the cap away. Always holds his nose when he drinks it, too. Says the aroma, he calls it 'the bo-kay,' reminds him of Texas so much he starts cryin', and he don't like to dilute his whiskey with tears."

"She heaved a couple of times, then she hit fluid."
1. Firsthand description of an oilfield worker's girlfriend drunk to the point of regurgitation. In the oilfield, "hitting fluid" can mean striking oil.

And a few lines about the Dark One, the Hangover, who Waits in the Wings:

"I feel like hammered dogshit."

"I feel like I was eat by a coyote and then shit off a cliff."

"I feel like I was shot at and missed, shit at and hit."

Sex, and other Bodily Functions

Assjack
1. A small cushion kept in the back seat of one's car, used for elevating the pelvis of the sexual partner, facilitating entry and deeper penetration. Should anyone ask, the cushion is for resting Granny's neck on long Sunday drives.
"Damn, Elon! That your assjack smells so bad?! You ought to burn that thing, or cut it up into catfish bait!"

To pack someone's peanut butter
1. To commit aggressive anal sex.

The Flying "T"
1. An acrobatic sexual stunt in which the lady is placed standing on her head, legs spread, given mouth-to-vagina resuscitation, while the legs are cranked back and forth. Stop when she's drilled into the ground up to her navel.

"When my dick gets hard it draws up so much skin I can't even close my eyes."
1. Now we know why elephants are so wrinkly.

A Blue-Steel Hardon
1. An adamantine erection. The difference between a regular hardon and a Blue-Steel hardon is: when you press downward on a regular hardon and release it, it springs back up and slaps you in the belly two or three times. When you press down on a Blue-Steeler, your feet fly out rearward from beneath you.

". . . let me just put the head in . . ."
1. This means, "Allow me to just insert the glans penis, and I promise not to take advantage." A lie. A pathetic, oft-attempted line which never works. No wonder there's a Women's Liberation Movement.

"How's your hammer hangin'?"
1. A general greeting with penile undertones. Or hardware overtones.

"When a man gets fuckin' on his mind all his brains go into the head of his dick."
1. With room to spare.

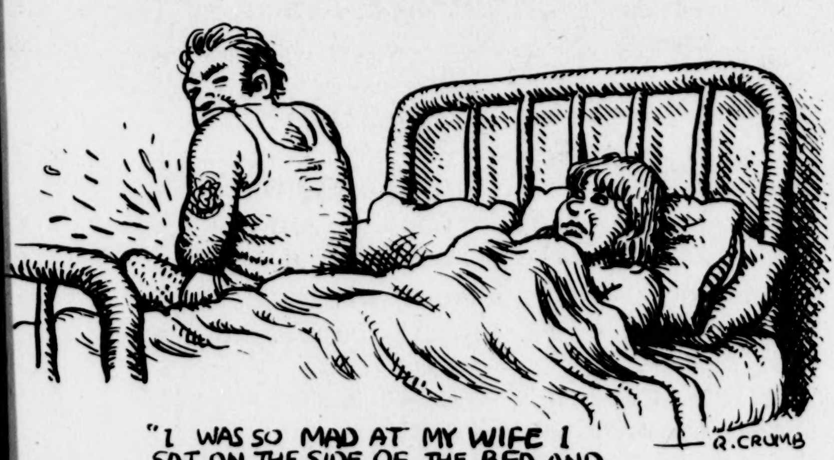
Lip wrasslin'
1. Osculation.
"I hate to pick J.L. up for work. Him and his wife stand there and lip-wrassle for ten minutes before he's ready to go. Sounds like a toothless tomato-eatin' contest."

Swappin' spit
1. Osculation.

Gudentight
1. German word for "virgin."

Duckbutter
1. Smegma

"I'm not prone to argue . . ."
1. That is to say, "Contention is not the primary reason I'm lying naked beside you . . . ."



"I WAS SO MAD AT MY WIFE I SAT ON THE SIDE OF THE BED AND JACKED OFF JUST TO SHOW MY INDEPENDENCE!"

"It's o.k. to lope your mule if he comes up, but it's not o.k. to call him up."
1. This means that if you have an erection, it's acceptable to masturbate; it is, however, unacceptable to arouse yourself for the purpose of masturbation.

"This won't hurt, did it?"
1. Texas foreplay.

"Gettin' any mud for your turtle?"
1. "Have you engaged in sex lately?"

". . . gave my dick a dishonorable discharge . . ."
1. Masturbated.
"When I was in the army, a sergeant caught me in the shower in the process of giving my dick a dishonorable discharge. I looked him straight in the eye and told him it was my dick and I could wash it as fast as I wanted to. Never missed a stroke, either."

"They go off in the bushes and bump dickheads, I reckon."
1. Erroneous speculation of sex between consenting males. The above remark was made by a Texas cowboy concerning the enigma of male homosexuality.

And it came to pass: Gas

"Son, the next time you eat a skunk, try peelin' it first."

"Rave on, Toothless Wonder!"

"Well, your voice has changed, but your breath smells the same."

A Few Meteorological Observances

"It got so cold my dick drawed up almost to my knee."

"It was rainin' frogs fuckin' ducks."

"The rain was so spotty the other day, I was out huntin' and had my double-barreled shotgun leanin' up against a tree and it only rained in one barrel."

"It was rainin' like a double-cunted cow pissin' off a forty-foot cliff through a screen onto a flat rock."

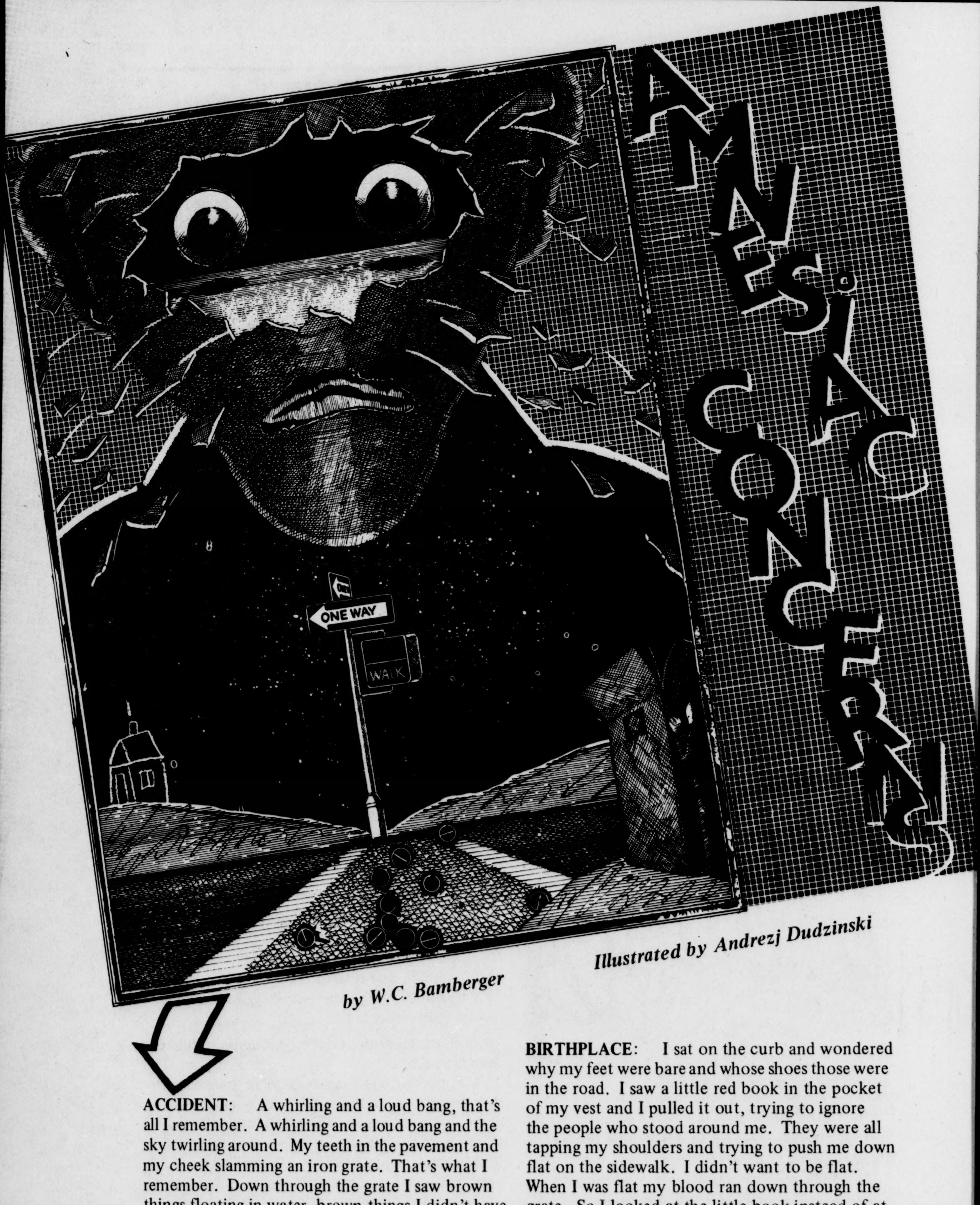
Philosophical Observations

"You can wish in one hand and shit in the other and see which one fills up first."
1. Wishful thinking is far less likely to produce results than direct action.

"Blood is thicker than water, but come is thicker than blood."
1. Members of one's family deserve more loyalty than those outside the family, but one's spouse deserves more loyalty than even blood relatives. If you have to take sides between your wife (or husband), and a member of your family, your mate always comes first.

"You buy 'em books and you buy 'em books and they just chew on the covers."
1. Some people are impervious to the counsel of Wisdom. They just can't, or won't learn. ■

AMNESIAC CONCERNS



Illustrated by Andrezj Dudzinski

by W.C. Bamberger

ACCIDENT: A whirling and a loud bang, that's all I remember. A whirling and a loud bang and the sky twirling around. My teeth in the pavement and my cheek slamming an iron grate. That's what I remember. Down through the grate I saw brown things floating in water, brown things I didn't have words for. A sucking noise came up through the grate and pulled at me. A trickle of blood ran from my temple, spread across the grate and slid down into the current below. I remember that.

BIRTHPLACE: I sat on the curb and wondered why my feet were bare and whose shoes those were in the road. I saw a little red book in the pocket of my vest and I pulled it out, trying to ignore the people who stood around me. They were all tapping my shoulders and trying to push me down flat on the sidewalk. I didn't want to be flat. When I was flat my blood ran down through the grate. So I looked at the little book instead of at them. It had a pebbly red cover and it fit in the palm of my hand, followed the rise of my thumb and the curve of my calluses like it knew me well. The cover was like a small piece of red carpet. I ran my fingers over it and felt the pressed-in words *Pocket Dictionary*. The gold lettering looked so sure of itself.

CHALK: I passed by that grate again today. I stood over it and wiggled my bare toes, letting their shadow lay over the iron. Every time I pass that corner I stop and stare down into the water where my blood washed away. I stand there and look at the white chalk outline the men in blue drew from the stories told by the people who'd tried to make me lay down. The outline doesn't look like me: none of those people knew me. One part they got right, though: the outline of my skull is incomplete where the chalk lines skip over the holes in the grate.

DREAMS: The best and the worst of it. My comfort and my chamber of unrecognizable horrors. My conscious memory is almost all gone, but my dreams still remember things. They taunt me with half-facts and blurred faces. At first I tried to spend most of my time sleeping. I'd lie down in my cardboard box in back of the market and dip into my little red book until I fell asleep. My dreams are like the code name for a rare virus, obscure and threatening. Sometimes I try to have "good" dreams, if only to see the faces of the women who would turn up in them. But I've only got this one pair of pants, my walking pants and pajamas in one. And what if the dream is too "good"? How did I ever get through puberty?

EGO: Means the conscious self. A woman in a bonnet gave me a pamphlet that said a man having a big ego is a bad thing. I've discovered my first virtue.

FAME: My first question was "Who am I?" My second question was "Do any of you know me?" Their answer was "No." It must be comforting to have everyone know you, to be immune to this plight. To have "fame." I must not have any. Only joggers and old men with bottles ever nod to me. I want to be famous.

GERONIMO: A famous name. When I thought about fame I remembered Geronimo. He was a famous chief of American Indians, I remembered. But I also remembered that Geronimo is the cry of someone leaping into the unknown. Which meaning has made this word stick in my mind?

HOUDINI: Another famous name. Someone else who never had to fear amnesia. Someone else who never had to wander around and around a single block and stare into the eyes of the other walkers, watching for a spark of recognition. Houdini was an escape artist. I remember that he promised to speak to his loved ones "from the other side," if there was any possible way. He never managed it, as far as I can remember.

I:

JU-JITSU: The red and white sign said "Your Opponent's Strength Can Be Used Against Him." "A thousand-year-old principle," it noted in small black letters. Most of the people going in and out the door had bare feet. I took a deep breath and walked right up to the girl at the desk. She was beautiful, with a cat's eyes and hair as long, black, and shiny as a waxed Cadillac. I said, "I guess my opponent is what I lack." She looked at me kindly. "How can I use what I don't have against what isn't there?" Her eyes blinked and her fingers grew stiff on the desk top. The thousand-year-old principle was no help. All this beautiful girl had to offer me was a hand like a small spade.

K . . . : K means nothing to me. First the false promise of an ancient principle at J, and then this. I searched through the red book, but not a single K touched me. How can a letter of the alphabet, a huge block of my own tongue – which I've held onto after losing nearly everything else – hold not a single word that stirs me? The letter insists on standing alone. I considered going on, skipping K, abandoning my orderly approach. For all I know my answers are waiting at L and I'm torturing myself for nothing. But I didn't want to skip it – skipping makes me think of the chalk and the grate. Even if my system is flawed, I have no other. Is my key in K? I kept asking myself. I kept trying *key*, expecting something from it, but nothing happened. I must have some locks somewhere. I used a black crayon I'd found and drew a large K on the inside of my cardboard box, to remind me to come back to it.

LAUNDRY: I fell asleep thinking *key* and the wind blew dirt in on me while I slept. I went to the building where I always see women bent over sinks and I found something I'd forgotten to look for. I found it in the round glass of a dryer. I danced from reflection to reflection and held my breath in between: my face! Ragged with stubble and streaked with dirt, but *my* face. I looked kind and I looked pensive behind the dirt. I patted water onto my skin and watched it trace my jawline. Not the he-man type, but I could smile at myself. My face didn't disappoint me. I was glad. Liking your-

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About myself: Born in Flint. In-and-out of Michigan. Studied at Naropa Institute with Allen Ginsberg, Phil Whalen, Wm. Burroughs, etc. Also at U. of Oregon in Eugene – where the first draft of this story was written in the back of a large truck, using a piece of plywood as a table. Genesis of this story was my own (seemingly permanent) half hour memory loss after I was struck by a car (age ten or so). This space could be put to better use urging readers to investigate the books of William Eastlake, or the records of Captain Beefheart. In other words, follow your heart! —W.C. Bamberger self is something worth remembering. I washed and dried my jacket, making faces at myself in the round hot glass.

MEMORY: The heart of it. At M, thirteenth of twenty-six letters, dead center in the little red book, I found: *memory* in all its shapes and shades. I found *memo*

memento
memento mori
memorabilia
memorandum
memorial
memorius
memorist
memoriter
memorize
memory

What a clutter for the attic. I'd lost more than I'd realized. I reread each word and its meaning. They blurred and overlapped, intruded on one another, with intersections as badly snarled as the one that holds my grate. They gave me a bad day. Finally I skipped down to the first word after *memory*. I found the word *Mem-sahib*. The sound of it was soothing, like a memory I have of a woman's quiet breathing. I closed my book before the definition could spoil the word. I sang myself to sleep with *Mem-sahib*.

NICHE: A word as quick and friendly as a nodding head met me in the morning. Niche: the place something belongs. I woke up to that word and felt like I could just sit in my box all day long, just open the top and let the sun shine on me as I sat there. If I had a niche somewhere off this block it must be empty, I decided. Surely someone in the next niche will notice. Maybe my niche will come looking for me, undaunted by the traffic, like a St. Bernard with my I.D. hung around its neck.

OASIS: Until my niche comes for me I'll stay in my oasis. An oasis is a fertile spot in the desert. I feel like a desert: my name's blown away, so has my age, my occupation, my taste in foods, who it is my loins ache for. My oasis is my taste for words. I seek them out anywhere, in old newspapers, in the pamphlets people are always handing me, on candy bar wrappers, even on signs in the windows of stores. I collect words and find ways of putting them together in new combinations: everything goes together if you try long enough. Today I put these two things together: "Infancy Conforms To No One – Emerson," from a sign in a "fat toddlers" shop, and "In The Beginning There Was The Word," from the front of my little red book. The combination I came up with was this: like an infant I'm struggling with the alphabet, and like an infant I grab at the shiniest beads first. I see myself becoming so fascinated by things I don't understand that I sometimes forget to try to apply them to my problem. Still, fascination helps to keep the panic down.

PRECONCEPTIONS:
1) Cars are dangerous.
2)
3)

QUARANTINE: My preconception has kept me on this block and the only person I've spoken to since the accident was the beautiful ju-jitsu girl. And no one has bothered to stop this barefoot man in the wrinkled clothes who hasn't crossed a street in five days. No one suspects. My face gives nothing away. My composure is my quarantine. Composure is on my face like a tattoo: manners, the stiff upper lip, being a man, even I remember a half-dozen names for it, but all they mean is that I can't throw myself onto a passing woman's breast and tell her I don't know who I am. I can't ask a man to take me by the hand and lead me across the street. I can't break myself. I'm in voluntary quarantine.

ROMULUS AND REMUS: Left, in their blank-minded infancy, to the wolves, they grew up to found an empire. They never worried about their lives before their abandonment. They just went ahead and spoke and thought wolf. Just because it's a fable doesn't mean it holds no hope. If I can't rebuild my old self, maybe I can build a new one. Every night I lay in my cave of cardboard, with *Mem-sahib* as my pap and the legend of Romulus and Remus as my warmth.

SPONGE: I found a dirty sponge the market had thrown out. Its edges were frayed but it would still pick up water. It does the same thing I've been doing, absorbing what's around me. Abhoring my vacuum. Maybe I can fill myself again, like the sponge soaking up the dirty water of the puddles I put it in.

TRAFFIC: What kind of new man can I hope to build in myself if I can't even cross a street? Every time I approach a curb I get a hot salt-water feeling in my head. I think it must be a hint of tears. So I keep going around and around this one block, watching the signs change, the discounts come and go. Maybe I belong here now. On this block is the grate where I landed, the box where I sleep and the laundry where I go to look at myself. I can't make myself brave the traffic.

ULTIMATUM: I've made up my mind that I have to get off this block, stop settling for playing with beads. I have to step out into the traffic and cross the street. I don't think I can find myself – new or old – if I don't. I found some matches and burnt my box. I stood there warming my hands until the last ash blew through the fence.

VACILLATIONS: Hesitations. Oscillations. Yo-yoisms. I stood at the curb and I stared out into the traffic. I stood by the light pole and watched

ONE WAY
WALK

the current of people crossing the street, safe inside white lines that have no gaps in them. Across the street was the world. The world that had washed out of me and down into the sewer. I stood on the corner blindly bartering with myself: Do I want to trade my oasis of fascinations for facts? The arguments for both sides would take as long to list as a complete inventory of The House That Jack Built. I wasn't sure I wanted my old life back, but I wasn't sure I could build a new man I'd enjoy being. I knew my only alternative was to stay where I was, collecting bright little memory beads and trying not to string them together.

WALTZ: I stood watching a large pendulum clock in a store window. The weights swung back and forth. I found myself wanting to dance. I remembered that no sane man dances on the sidewalk, but it was dark, nearly midnight. So I danced in the moonlight. I danced and I danced, a little boxlike step, all over the sidewalk, timing myself with the pendulum's swing. As I danced a name tried to come into my head, a sweet name. I danced until that name finally emerged: "waltz."

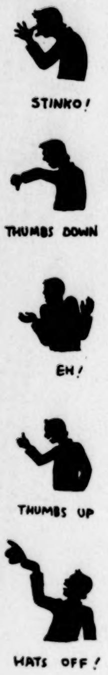
XENOPHOBIA: The minute I turned my back on the promise of the crosswalk I began watching the faces of the people I passed, searching for something new in them. I was expecting xenophobia: the fear of outsiders. The minute I backed away from that curb I became more of an outsider than ever. Before, even with my blank slate, I was like them. I had aspirations, goals, I wanted to get ahead. I felt guilty about my lack of I.D., my bare feet – which I saw was unnatural – and about not having a number where I could be reached. But now I have no qualms. I'm the only adult on this block with no lines on his forehead. I keep thinking I will be discovered, and I remember that an outsider is usually seen as a threat. I have a new fear: the fear of xenophobia.

YOUTH: Nothing good remains the same, only this amnesia goes on and on. I never saw xenophobia in anyone's eyes. They must have known that I couldn't hold out for long. I naively thought I could stay happy with my reflections, my minute waltzes and the tiny paper cuts I get from my little red book. I even found another home with THIS SIDE UP on it in red. But the day I backed away from the *WALK* sign, that green imperative, I made a decision where I had to weigh alternatives. Once I'd made one such choice I cracked faster than a bounced egg. The fascinations I'd gathered like little beads began stringing themselves together, lining up in my mind in order of "shininess." Suddenly I had hierarchies. A few small decisions about priorities are all it takes to make yourself a "responsible" man. So the pendulum began to swing back. I found myself ignoring little things if they didn't seem *important* in some immediate way. I found that a man can't will himself to stick to the trivial in life, can't hold on to childish ways by force. Ignorance may be bliss, but wishing for it is as fruitless as wishing for a bigger organ. Even the red book betrayed me: I tried skipping back to the middle of the book, back to the Ms, where I'd found lovely *Mem-sahib*, back where I'd been equally far from where I'd started and where I seemed to be going, but the entry I lit upon was *mid-life crisis*. The things I find fascinating on this block are drying up. The block is getting smaller every day, herding yearnings into me, driving me toward the traffic. I've stopped looking for xenophobia or even recognition in the eyes of strangers. Now I only look for approval. Emerson would think me less of an infant with each passing hour.

ZIPPER: Like a child I've been looking at everything with an eye for the bauble, for the immediate pleasure. I was fascinated by ordinary objects, but somehow overlooked my own zipper. One reason no one ever spoke to me was that I've been walking around without remembering to zip my fly. City people know a deviate when they see one. Have you ever stopped to think what a wonderful, utilitarian gadget a zipper really is? All those shiny bits, all disconnected, shooting off at odd, relaxed angles . . . but then a metal tab comes zooming and gathers them up. When they reappear they are a ribbon of steel, tightly joined, secure.

Now, let me do this right.

accident (ak' se dent) *n. An unexpected and unpleasant happening, that results in loss, etc.* ■



Content **Style** **Consequence**

Boardroom Reports

Neither a magazine nor a journal, **Boardroom Reports** *is one of the best of business newsletters. Twenty-four issues per year are packed like survival food with up-to-the-minute information on business trends, stock-market predictions, strategic advice, capsule reviews, and management suggestions. There is more information in one issue of* **BR** *than in half a year of* **Fortune** *magazine. Not always thorough, because of brevity, but points to sources for follow-up. Subscribers get an extra bonus: they will receive some of the most exotically affluent junk-mail around due to* **BR***'s highly prized list.* —*Paul Hawken*

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Phone bills. Calls listed *without* a time or with the digits missing (5 PM, instead of 5:00 PM) more often than not have been misbilled.

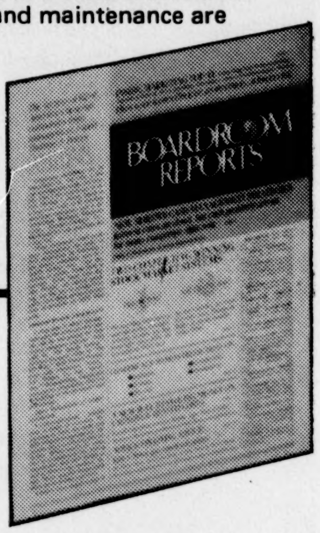
•

Barge shipping rates are as much as 30% below last year's levels, making barges worth a look for shippers that don't require fast delivery. Transportation analysts expect the slump in barge rates to continue for a long time.

•

Desk-top computers often turn out to be used *much less* than anticipated when they're bought. Some studies report that use averages only two hours daily. *One solution*: Set up a computer pool to operate like a car pool, with common machines stored in a central area and assigned as needed. Security and maintenance are also easier.

Boardroom Reports
Marion Buhagiar, Editor
$49/year (24 issues) from:
Boardroom Reports
500 Fifth Avenue
New York, NY 10110



Content **Style** **Consequence**

Challenge

Like many professionals, economists tend to use one voice when addressing the public through the popular media and an altogether different voice — truer, rougher — when thrown in the ring with their colleagues. **Challenge** *lets you eavesdrop on professional economists arguing among themselves. It's by far the most accessible of the academic economic journals, and though it's biased toward liberal interpretations, it's hardly dogmatic. What other arena would offer Julian Simon and Lester Brown the opportunity to lock horns in the same issue? This is where the public decision makers work out.* —*Joe Kane*
[Suggested by Michael Phillips and Paul Hawken]

•

One alternative to current individual income tax is a progressive expenditure tax.... An expenditure tax would require us to pay a year-end tax on our spendings at the grocery and the five and dime, it would not require that we save all of those cash register tapes under penalty of the stockade. Rather, the expenditure tax would work superficially much like the current income tax. The tax would be withheld out of workers' paychecks, just as it is now. When the expenditure tax return was filed, the same income computation as is made now would be the first step in finding the final tax liability. However, from income would be deducted all saving; the increase in checking and saving account balances, purchases of stocks and bonds, and so on (saving could obviously be negative rather than positive). The tax base would thus be all of income that was not saved (or all of income plus further spending out of prior saving): hence, expenditures.

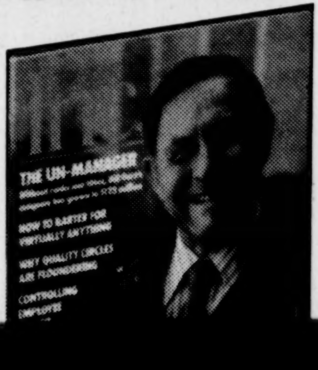
Challenge
Myron E. Sharpe, Editor
$28/year (6 issues) from:
Challenge
80 Business Park Drive
Armonk, NY 10504

Content **Style** **Consequence**

Inc.

Inc. *offers something that business magazines like* **Fortune** *and* **Business Week** *don't: information the small-business person can actually use. The emphasis here is not business as mega-institution or business as entertainment but business as process. For example: A high-powered Silicon Valley copier salesman told us* **Inc.***'s article on how to buy an office copying machine was the best thing he'd ever read on the subject. And though the magazine's tone is an unabashed celebration of American business — you'll find little moral, political, or environmental analysis here — it talks about what works, not what business-school theory says should work. The result is that although* **Inc.***'s intended audience is those businesses with volumes in the $1 million to $100 million range, almost any small-businessperson will find at least one very usable article in each issue.* —*Joe Kane*
[Suggested by Paul Hawken]

Inc.
Milton D. Stewart, Editor
$18/year (12 issues) from:
Inc. Magazine
P.O. Box 2538
Boulder, CO 80322



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How many copies do you make? This is the place to start, because if your answer is "fewer than 250 per month," you may not need your own copier. If you make fewer than 1,500 to 2,000 copies per month, you probably don't need a plain-paper copier either. Assuming that you make more than 2,000 copies per month, however, it's important to be accurate in estimating your present and future copy volume. "Don't fool yourself," warns Patrick Marasco, an independent dealer with 30 years of experience. "A copier forced to make more or fewer copies per month than the manufacturer suggests will break down — a lot. With few exceptions, copiers that seem to be perennially broken are low-volume copiers in high-volume environments, or vice versa."

Make your own magazine

I started and operate a very interesting magazine, **Demand.** It is edited and published by the readers and contributors. I leave a master copy in a New Haven xerox shop. Readers come have a copy made, if they want one. I also leave a folder at the copy shop. Contributors leave their contributions there.

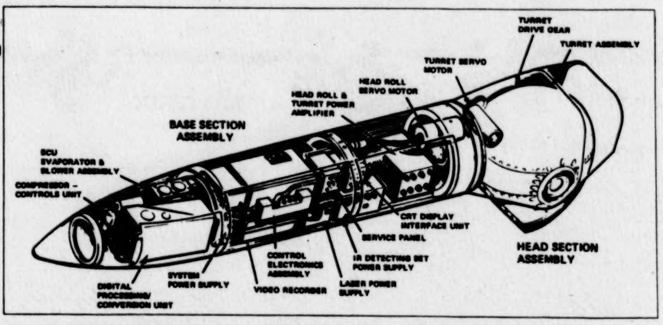
Every two weeks I jog the contents of the drop-off folder together. I paginate it, perhaps after arranging the contributions in a pleasing order, write up a table of contents, put an illustrated page on top for a cover, and leave the

Content **Style** **Consequence**

Armada International

With regards to CQ's recent series of articles on efforts to bring about world peace ("Force Without Firepower" by Gene Keyes, Summer '82 CQ and "The Mo Tzu Project," Fall '82 CQ): **Armada International** *illustrates the problems involved in controlling the influences of armed forces. Full-page ads for a multitude of weapons — including the Exocet Missile of the Falklands Islands War fame and detection systems for Exocet-type missiles that might have saved the British warship Sheffield — give a clue to the profits to be made in weapon and counter-weapon sales.* **Armada's** *articles about the logistics of moving and supporting large forces would be equally important to both Mr. Keyes' army and current military planners. There are also reports comparing the military strength of opposing forces, giving information not filtered through the usual military-political structures of the United States. But most of the information is, for those opposed to continued military build-up, of the know-thine-enemy ilk. The January/February 1982 issue had the best breakdown of where the increased military budget Reagan offered in 1982 was to be spent, weapon system by weapon system. That information never appeared in my local newspaper.*

—Michael H. Goldberg

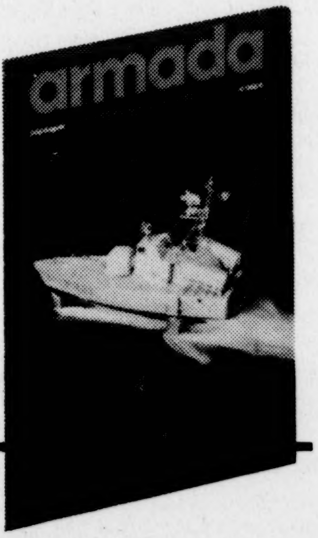

TURRET DRIVE GEAR
TURRET ASSEMBLY
TURRET SERVO MOTOR
HEAD ROLL SERVO MOTOR
HEAD ROLL & TURRET POWER AMPLIFIER
BASE SECTION ASSEMBLY
ECU EVAPORATOR & BLOWER ASSEMBLY
COMPRESSOR — CONTROLS UNIT
CRT DISPLAY INTERFACE UNIT
SERVICE PANEL
HEAD SECTION ASSEMBLY
IR DETECTING SET POWER SUPPLY
CONTROL ELECTRONICS ASSEMBLY
SYSTEM POWER SUPPLY
VIDEO RECORDER
LASER POWER SUPPLY
DIGITAL PROCESSING/ CONVERSION UNIT

Ford Aerospace is now producing 149 Pave Tack weapon control systems for the US Air Force, and an additional 10 units for the Royal Australian Air Force, which intends to equip its F-111C aircraft with the system. The AN/AVQ-26 pod system contains a forward looking infra-red (FLIR) sensor as well as a laser designation and range receiver subsystem. The fully stabilized pod is not at present equipped with an automatic tracking attachment (this task is performed manually).

●

Despite massive influence from propaganda efforts and communist ideology, the morale of Soviet seamen does not seem to be very good. During the past few years there have been a number of mutinies, some of which could only be suppressed with the use of weapons, and even such privileged members of Soviet society as destroyer commanders have attempted desertion. Discontented Soviet seaman have increasingly thrown bottle-letters overboard, especially when passing the Danish and Turkish straits, in which they not only convey their indignation with bad accomodation and food on board, but also comment on general conditions within the USSR. Often included in these bottled messages are interesting references to the nature of the mission which the vessel is undertaking.

Armada International
Carl M. Holliger, Publisher
$70/year (6 issues) from:
Expediters of the
Printed Word Ltd.
572 Madison Avenue
New York, NY 10022

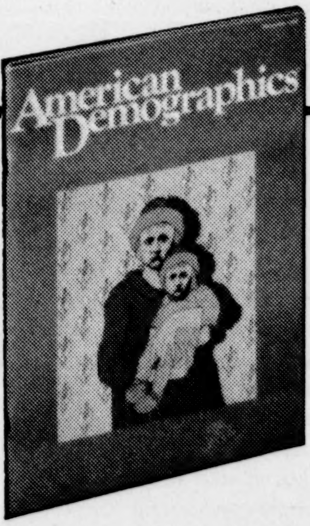


Content **Style** **Consequence**

American Demographics

Considering that demographics provides the mass culture with its self-knowledge, most of us are demographically illiterate. I didn't realize how much this industry had evolved until I was introduced to this slick trade journal for seekers and users of statistics. Demographic question-askers are usually politicians and advertisers, so the answers are weighted with manipulative purpose, and real news of economic change or neighborhood growth often gets lost. **American Demographics** *keeps track of that news. It covers the latest raw data — how only one state (West Virginia) has more women unemployed than employed, for instance — and reveals how the data was gathered, how it will be used, and occasionally how little to trust it. I wish the magazine was more cynical and investigative, but I find it nonetheless as fascinating as a funhouse mirror.*

—Art Kleiner
[Suggested by Tom Parker]

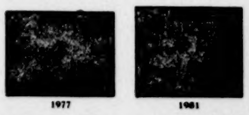


American Demographics
Bryant Robey, Editor
$42/year (12 issues) from:
American Demographics
P.O. Box 68
Ithaca, NY 14850

●

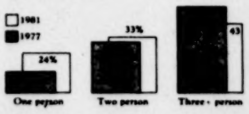
During the 1970s, the 15-to-24 age group increased 15 percent in New England, but in the 1980s it will decline about 21 percent. In contrast, the 35-to-44 age group should increase 44 percent during the 1980s, according to projections by the Joint Center for Urban Studies of MIT and Harvard. While middle-level workers will find promotions difficult to obtain, entry-level workers will enjoy unprecedented opportunities.

Median Age of Homebuyers

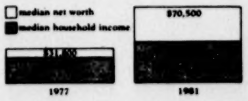


Singles and Unmarried Couples
(percent of homebuyers)

Household Size
(percent of homebuyers)



Median Household Income and Net Worth
(in current dollars)



Median Monthly Housing Expense
(and ratio of expense to income)

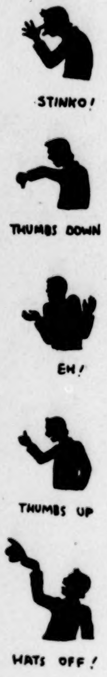
pile down at the copy shop. That pile is the new master copy, the new issue. I always leave each master copy at the shop for a month.

The only editorial policy is this: EVERYTHING GOES IN. If something's too long, serialize it. If something's offensive, find the author and ask her if she sincerely wishes it to be read: if she does, then print two pages — if none of the readership lets you know that they resent paying for the thing, run the rest of it in subsequent issues.

Demand has come out every two weeks for four months now. Every page of every issue has been a high-quality read.

I would like to see **Demand** spread throughout the places that could support such ventures — the university towns, the big cities. Would you start one out your way, or talk it up among those who might? This country needs self-maintaining infrastructures for culture.

Dan Duffy
Woodbridge, Connecticut



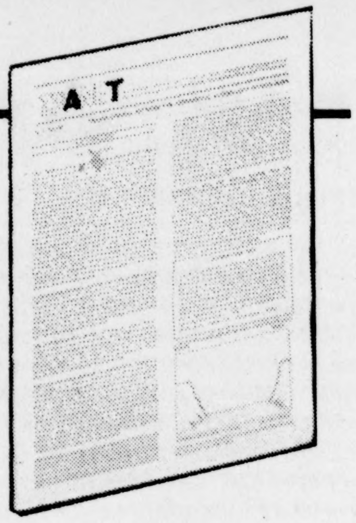
Content 👍 **Style** 🤷 **Consequence** 👍

Tranet

Tranet, which describes itself as a "newsletter for those . . . actively developing appropriate/alternative technologies around the world," takes "appropriate technology" to its fullest extent: it covers everything from telecommunications in Latin America to the children's antinuke movement to home schooling. More a directory than a journal, it is, according to J. Baldwin, "better than the others for us ordinary mortals." —*Joe Kane*

[Suggested by Jim Fadiman]

Tranet
Bill Ellis, Editor
$15/year (4 issues)
from:
Tranet
P.O. Box 567
Rangeley, ME 04970



●

Infectious Disease and Epidemic Control is now within grasp of the Third World due to special research on portable means for rapid diagnosis of tropical and other diseases. One portable kit has been designed by Portable Rapid Diagnosis Technology (PO Box 667, Solana Beach, CA 92075, USA). This kit contains a rugged microscope, light source which will operate from a car battery, alcohol burner, and other chemicals and devices for detecting salmonellae, antigens, antibodies, bacteria and toxins. All this is packed in a 13-kilogram kit that can be transported by jeep or back pack over the toughest terrain without damage.

●

Any person can declare him/herself a world citizen says Gary Davis who has been proving it since 1948 when he renounced his USA citizenship and declared himself a "World Citizen." Now Davis and 1500 other adherents to world citizenship hassel themselves from nation to nation around the world with their passports from the World Service Authority (Suite 318, Atlantic Bldg., 930 F St. NW, Washington, DC 20004, USA). Their newspaper, **World Citizen News**, will keep you aware of related actions ($12/6 pounds sterling).

Content 👍 **Style** 👍 **Consequence** 🤷

Fortean Times

Content 👍 **Style** 🤷 **Consequence** 🤷

The Skeptical Inquirer

Simply put, **Fortean Times** *loves to open the Pandora's Box which* **The Skeptical Inquirer** *longs to shut.*

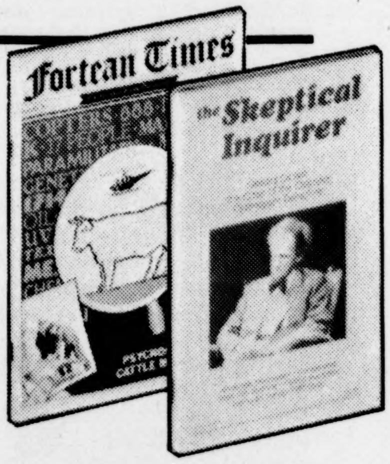
Flip open the lid and out tumble dozens of current reports of sea serpents, phantom hitchhikers, UFO abductions, and strange rains of frogs and meat. The stuff of dreams externalized. Following in the footsteps of Charles Fort, who first collected and catalogued such accounts earlier in the century, **Fortean Times** *regularly chronicles these phenomena and hazards a guess or two as to possible (and usually unorthodox) explanations. With several eccentric columnists, odd comic strips, and elegant shoestring graphic design,* **Fortean Times** *comes on chatty, like an affable old geezer who delights in the strangeness of the human condition.*

The Skeptical Inquirer, *on the other hand, would love to eliminate "pseudoscience, fringe-science, and superstition," though failing that it settles for skewering individual cases with equal parts scientific method and sarcasm. The academics and lay members of the Committee for the Scientific Investigation of Claims of the Paranormal who write and review for* **The Skeptical Inquirer** *make short shrift of psychics, the Bermuda Triangle, Bigfoot, and other manifestations of the "irrational," which* **FT** *seeks out. Of course, insufficient evidence or inconclusive statistics — two commonly cited conclusions here — do little to dissuade those who know what they've experienced and consider themselves innocent until proven guilty.*

Both journals share a compact format, a quarterly schedule and a similar sense of their own worth. In contrast to the slick pop-science magazines, these publications grow out of their publishers' obsessions, a hallmark of amateurs which is all too rare in big-time publishing. —*Jay Kinney*

Fortean Times
Robert J.M. Rickard, Editor
$12/year (4 issues) from:
BM — Fortean Times
London WC1N 3XX, UK

The Skeptical Inquirer
Kendrick Frazier, Editor
$15/year (4 issues) from:
The Skeptical Inquirer
P.O. Box 229
Central Park Station
Buffalo, NY 14215



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A woman leans over a dental spitoon. "Shut your mouth," said the spitoon. A few days later a man is lying prone in the same dentist's chair, when a voice, not the dentist's, commands from the surgery basin: "Open your mouth wider, stupid." A woman patient using the dentist's toilet was shocked when a voice from beneath her boomed, "Move your behind, I can't see a thing." And so on, for 11 months, up to 90 times a day, a mystery voice, in a gruff Bavarian accent, tormented the surgery of Dr. Karl Bachseitz, in the small West German town of Neutraubling. . . .

Inevitably Germany's distinguished poltergeist hunter was called in, Prof Hans Bender of Freiburg University, who should know what a case of parapsychology looks like if anyone does. . . . The **Express** (4 March) described the scene when Bender, an eminent 74-yr-old, arrived at the door of the surgery. "Bender is here. I'm scared. He wants to kill me," wailed the washbasin. "Don't worry, the professor won't hurt you. He just wants to talk to you," soothed his 17-year-old secretary Claudia stroking the rim. And when Bender concluded his 'interview' and was leaving, the voice called out: "Come back Bender. Help me. Release me." —**Fortean Times**

●

Event No. 8, Charles Berlitz version: "October 1978: (No exact date.) Three people on a 40-foot cabin cruiser disappear in clear weather and calm seas during a short trip between Bimini and Miami."

This case is, as Berlitz might describe it, a classic Bermuda Triangle disappearance. It has all the hallmarks of such an occurrence; namely, an unidentified vessel, with three unnamed people on board, vanishes on an unspecified date. The local newspapers carried no report of this incident and the Coast Guard was unable to confirm that a vessel matching this description had been lost in October. —**The Skeptical Inquirer**

Content Style Consequence

U&lc

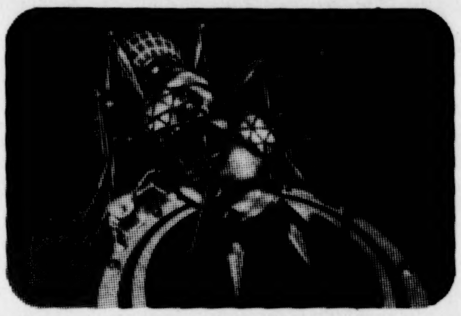
At first typesetting machinery grudgingly dragged itself along behind computers, but now the graphic arts industry is one of the most exciting technological arenas to watch. The best place to keep track of it is **U&lc**, *a quarterly tabloid of design and typography lore — past, present, and future. Few magazines give as much visual fun. It's free — paid for by its parent, the International Typeface Corporation, which shows off its new typefaces in each issue, and by type house ads, which are themselves often interesting. Because the purpose of the tabloid is to display type, the contents of some articles are arbitrary — whatever topic the designer thinks will look good in, say, ITC Tiffany Italic. My favorite section is the letters page, with its inventively artistic subscription requests.*

—Art Kleiner

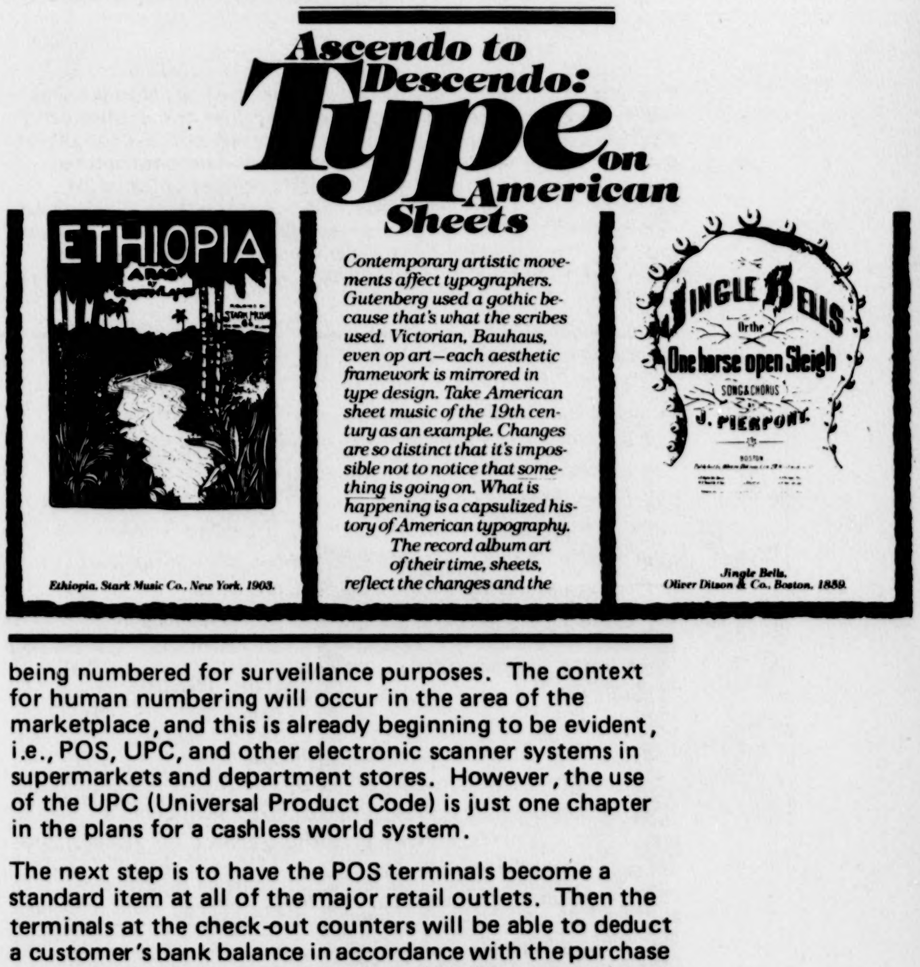
[Suggested by Evelyn Eldridge-Diaz]

U&lc
Edward Gottschall, Editor
free (4 issues/year) from:
U&lc Subscription Dept.
2 Hammarskjold Plaza
New York, NY 10017

"Nudes Ascending the Staircase" demonstrates computer versatility, from wire frame drawings, familiar to animation artists, to the fleshed out three-dimensional figure.



Starting with a visual concept by the artist, and with the assistance of a production engineer, this three-dimensional ant was rendered in full color entirely by computer.



Ascendo to Descendo: Type on American Sheets

Contemporary artistic movements affect typographers. Gutenberg used a gothic because that's what the scribes used. Victorian, Bauhaus, even op art—each aesthetic framework is mirrored in type design. Take American sheet music of the 19th century as an example. Changes are so distinct that it's impossible not to notice that something is going on. What is happening is a capsulized history of American typography.

The record album art of their time, sheets, reflect the changes and the

Ethiopia. Stark Music Co., New York, 1903.

Jingle Bells. Oliver Ditson & Co., Boston, 1889.

Content Style Consequence

Critique

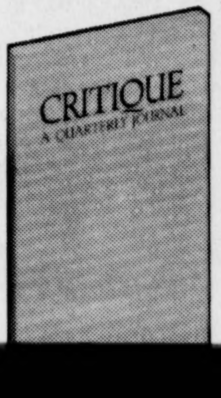
What Richard Hofstadter characterized in 1965 as the "Paranoid Style" in American politics — the nativist notion that we are being manipulated and subverted by secret conspiracies — dates back to the earliest days of our country when a furor against supposed Illuminati skullduggery exploded in 1798. Since then, popular scapegoats for domestic ills have included Freemasons, Papists, immigrants, and more recently Communists. The penchant for fingering secret enemies is hardly exclusive to the U.S. — the Nazis rode to power in Germany by exploiting fears of Reds and Jews, after all — but it may be only in America that this world view has been able to bloom into its lushest, most mutant varieties.

Critique, *a small, handsomely typeset quarterly subtitled "A Journal Exploring Conspiracy Theories, Exposés, Metaphysics and the 'American Culture,'" is sort of a social* **Organic Gardening** *for those who cultivate this realm of suspicious imagination. Recent topics have included Hollow Earth theories, perpetual motion, Nazis and UFOs, the Bilderbergers, the secret Muslim Brotherhood, and of course the ever-popular Illuminati and Freemasons.*

What rescues **Critique** *from terminal crankiness and makes it potentially worth your attention is editor Bob Banner's even-handed objectivity. Throwing the journal's pages open to competing theories, scenarios, and musings, Banner favors none over any other. Without an ax of its own to grind,* **Critique** *provides a rare forum for hearing out accusations (wild and otherwise) that would probably just fester beneath the surface of the American psyche if left to their own devices.*

I can't claim total detachment regarding **Critique** *— it's printed a couple of my reviews — but I find it a generally delightful antidote to the myopic seriousness of most political fare. You may too.* *—Jay Kinney*

Critique
Bob Banner, Editor
$10/year (4 issues) from:
Bob Banner
2364 Valley W.
Santa Rosa, CA 95401



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Like the breeding of cattle, the numbering of humans will facilitate management of people. Unless matters change, there is little reason to suspect that humans will object to being numbered for surveillance purposes. The context for human numbering will occur in the area of the marketplace, and this is already beginning to be evident, i.e., POS, UPC, and other electronic scanner systems in supermarkets and department stores. However, the use of the UPC (Universal Product Code) is just one chapter in the plans for a cashless world system.

The next step is to have the POS terminals become a standard item at all of the major retail outlets. Then the terminals at the check-out counters will be able to deduct a customer's bank balance in accordance with the purchase amount. A purchasing card will enable this transaction to take place.

The entire program has been called the Electronic Funds Transfer System (EFTS) and is the initial stage for completely automating consumer purchases without the use of cash or checks. The next step is to eliminate the use of such EFT cards and to implant a permanent number on the purchasers hand.

SignCraft • Signs of the Times

Sign-painting has always been a refuge for unsung artistry. An imaginative sign-painter can make the difference between a ghastly and an attractive business district in a small town; though these days the pre-eminence of franchise eateries and malls tends to overwhelm the eye with repetitive corporate logos.

Nevertheless, against all odds, well-crafted signs have made a comeback with a vengeance and there are probably more true artists out there currently than at any time since the '40s.

If you're a sign-painter you are probably already aware of these two trade journals, but for the rest of us here's a rare opportunity to get an inside glimpse at an industry too often taken for granted.

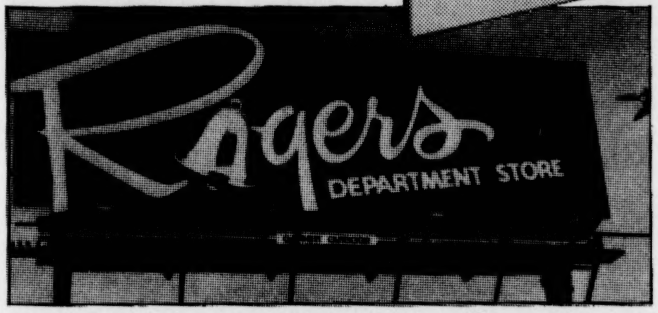
SignCraft *is the new kid on the block, just entering its fourth year of publication. Aimed primarily at small sign shops, its pages showcase examples of some of the most beautiful sign work around. Sign artists compare notes on how they do jobs and what they charge, and several "portfolios" are featured each issue.* **SignCraft** *is published by three brothers named McIltrot, maintains a comfortable editorial tone, and is an all around delight.*

Signs of the Times, *by way of contrast, logs in with three times the number of pages, though most of them are ads. This journal covers the entire sign field, including electric signs, billboards, laminated, pre-formed, and computer-generated. This is sign-making as a big business and the picture is not always pretty. But if you want a realistic perspective on the forces shaping our visual environment,* **Signs of the Times** *is essential.* —*Jay Kinney*
[Suggested by Thomas Hodgson]

SignCraft
Knockin'
SIGNS
The Contest Issue

SignCraft
Bill, Tom and Dennis McIltrot, Editors
$12/year (4 issues)
from:
SignCraft
P.O. Box 06031
Fort Myers, FL 33906

Signs of the Times
Tod Swormstedt, Editor
$21/year (12 issues)
from:
ST Publications
407 Gilbert Avenue
Cincinnati, OH 45202

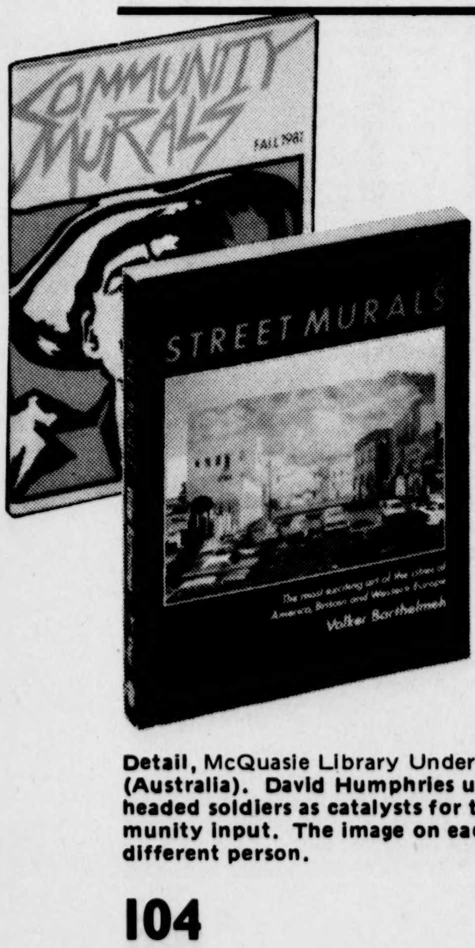


Mechanics at Gannett Outdoor Co. of Grand Rapids, MI slowed down an electronic school bell to get the "dong" effect of a ringing bell and mounted it on a 14 x 48-ft. structure on the main thoroughfare of Grand Rapids, reportedly the second busiest street in the state. . . . When two residents called with complaints, the bell was turned off. —Signs of the Times

The client wanted a sandblasted sign, but his budget was limited. He could not afford redwood or something comparable to that type sign. Instead I used a 4' x 6' sheet of duraply to do the job. This eliminated the lamination process and although it took a little longer to blast, it saved much preparation time. At the same time it achieved the sandblasted look for a price within the client's budget. Don't get me wrong — this job was not cheap, just less than one made with solid woods. —SignCraft

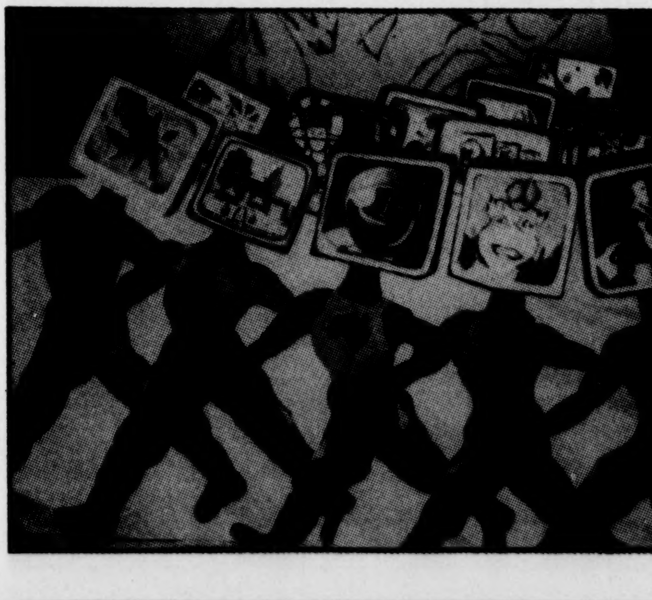
Community Murals • Street Murals

Any mural is better than a blank wall. Any community can learn about its own power to feed itself by getting together and making a mural. **Community Murals** *is a magazine that tells you and your neighbors how to do it and what to watch out for. (For example, several products being sold as anti-graffiti sealer destroy murals — they crack and lift the paint.) Most important by gathering news and photos from many countries,* **Community Murals** *tells you that wall painting is happening all the time all over the world — so why not here and now?*



Community Murals
$10/year suggested donation (2 issues)
from:
Community Murals Magazine
P.O. Box 40383
San Francisco, CA 94140

Street Murals
Volker Barthelmeh
1982; 115 pp.
$12.95 postpaid from:
Alfred A. Knopf, Inc.
400 Hahn Road
Westminster, MD 21157
or Whole Earth Bookstore

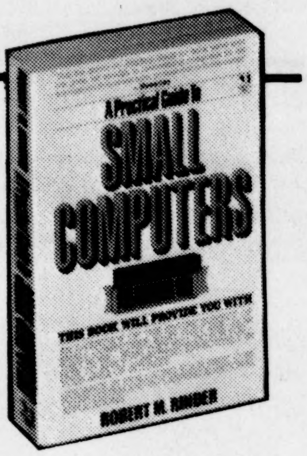


Detail, McQuasie Library Underpass Mural, 1978 (Australia). David Humphries uses images of television-headed soldiers as catalysts for the development of community input. The image on each screen is painted by a different person. —Community Murals

A Practical Guide to Small Computers

Unlike many computer guides, which play on the fears of the ignorant, this book looks ahead to the time coming soon when computers will be as taken for granted in small business and professional work as the adding machine, copier and typewriter are now. It explains computer jargon and terminology, describes how computers work, and, most importantly, helps you realize what decisions have to be made in choosing a business computer. No particular brand of hardware or software is recommended, making the book useful for considering anything from portable microcomputers to sizable minicomputer systems.

A few readers will use this book's somewhat inaccurate "payback" method to figure out whether they can financially justify their purchases: whether the expected benefits from a computer will outweigh its costs. In my opinion, you should either rely on gut feeling ("I really want a computer") or the more accurate "net present value" method, which takes into account the interest you'd make if you held onto your money. You should also supplement the book's purchasing suggestions by reading ads and reviews in recent issues of **Infoworld** *and* **Byte** *(***NWEC** *pp. 530-531). But those are small shortcomings in a book that I recommend to anyone who doesn't know much about computers, who is considering setting up a small computer system.* —*Christopher Stinson*
Solaster Software Corporation



A Practical Guide to Small Computers
Robert M. Rinder
1981; 288 pp.
$10.70 postpaid from:
Simon and Schuster
Attn: Mail Order
1230 Avenue of the Americas
New York, NY 10020
or Whole Earth
Bookstore

●

HIDDEN COSTS (one-time costs only):

Low-end system (to $20,000): Hidden costs will be about equal to up-front costs (equipment and programs).
Medium system ($20,000-$50,000): Hidden costs may be one and half to two times up-front costs.
High-end system ($50,000 and up): Hidden costs can be two to four times up-front costs, or more.

●

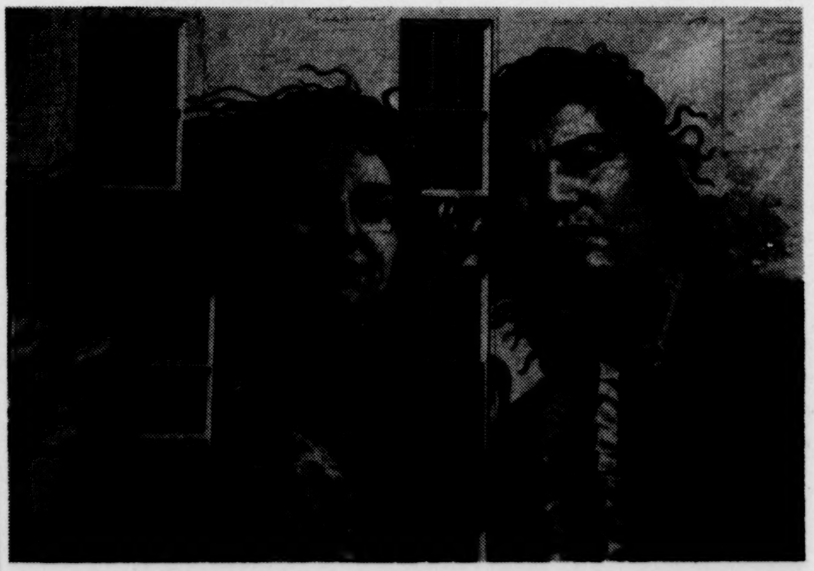
If you find somebody who has experience with a program you are considering, one of your key questions should be: How easy is it to change?

●

Start the documentation while you analyze your present system and plan how you will convert to a computer system. Put it all in writing and continue to do so as you select your facilities and set up your operating procedures. Use diagrams, charts and tables liberally. It doesn't have to look like a sales brochure, but it must be legible and thorough. Besides, there are going to be a lot of changes. But when the computer is finally installed and running, you are going to have really good documentation, because if you do it right, the documentation you produce cannot but help mirror the flow and operation of your system as it actually is. In addition, your planning process should be improved, because the act of putting things in writing forces you to be more precise and to think things through.

Community Murals *is black and white. For worldwide examples of how mind-changing and street-freeing colorful walls can be, get* **Street Murals,** *a beautiful book of color photos by Volker Barthelmeh. With images from* **Street Murals** *and advice from* **Community Murals,** *you'll soon be getting your art out on the street, where it belongs.* —*Anne Herbert*

Los Angeles, South Broadway. 1975. Bride and Groom. **Kent Twitchell.** —Street Murals



A Reader's Guide to Fantasy

There is a case to make for fantasy books as tools — as sources of myths to adopt within our own dreams and thus consciously/unconsciously empower our lives. But I'm not sure I can articulate why I find myself reading the genre avidly. The wiser the world and better crafted the language, the more deeply I get lost in the book, the more it stays with me, and the more I want to return. This **Reader's Guide** *has a feel for those qualities. It's warm and personal without being doctrinaire. It covers pulp sword and sorcery, yes, but also Oz, Lovecraft, Poe, the Mabinogion, Islandia, and "The Devil and Daniel Webster." I am told their* **Reader's Guide to Science Fiction** *is as good.* —*Art Kleiner*

A Reader's Guide to Fantasy
Baird Searles, Beth Meacham, and Michael Franklin
1982; 224 pp.

A Reader's Guide to Science Fiction
Baird Searles, Martin Last, Beth Meacham, and Michael Franklin
1979; 275 pp.

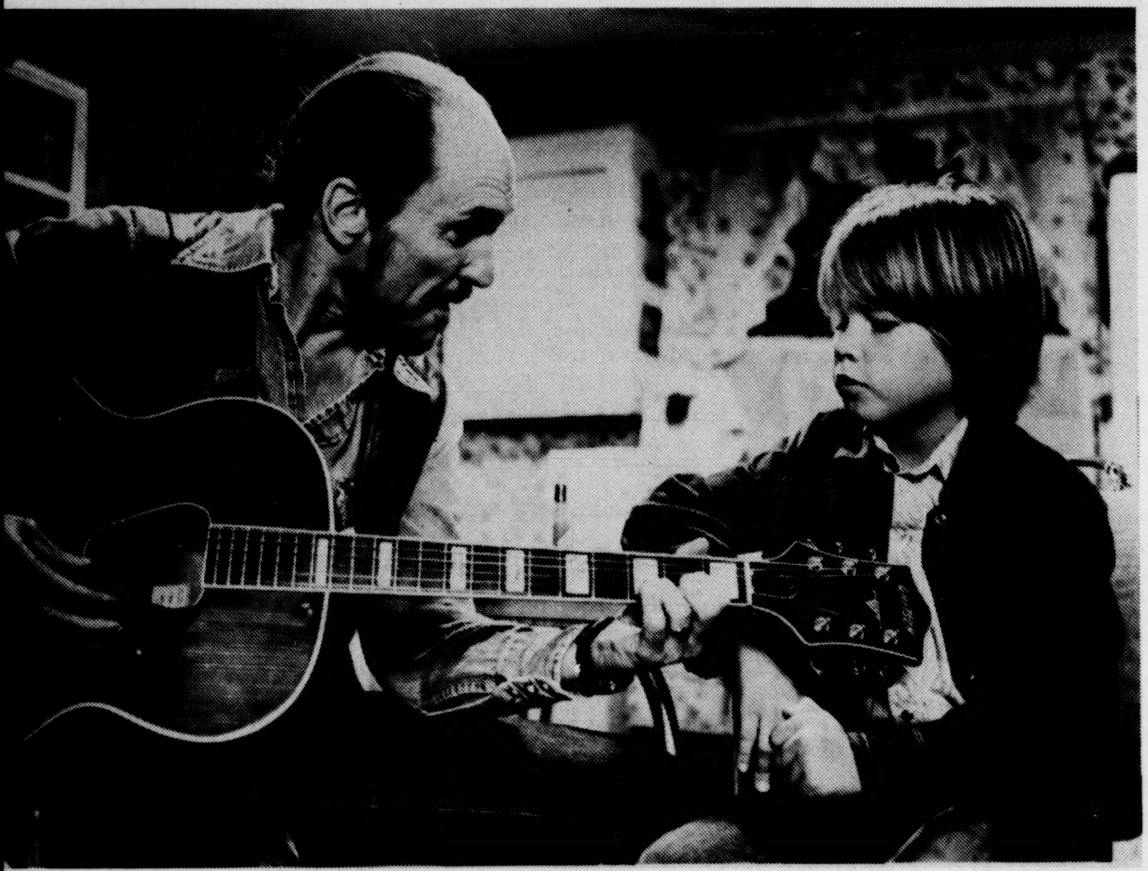
$3.20 each
postpaid from:
Avon Books
959 Eighth Avenue
New York, NY 10019
or Whole Earth
Bookstore

●

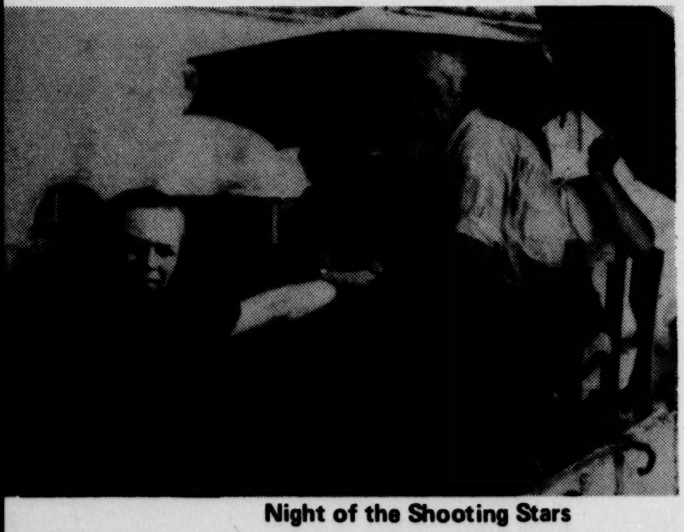
Hamlet was not the only melancholy Dane. If you think of the stories of HANS CHRISTIAN ANDERSEN as sweet little tales for kiddies, or associate him only with Danny Kaye singing about anthropomorphic inchworms, think again. Adults who have never read Andersen, or for whom his stories are buried in the mists of childhood, are in for a surprise (and a bit of a shock) on reading his work. It is darkly shaded, often moving, often frightening, with an unnerving use of sophisticated violence (as opposed to the straightforward use of brutality in folk tales). Over all is a pervasive sadness of loss (of love, as in "The Little Mermaid," or of existence itself, as in "The Fir Tree" and "The Steadfast Tin Soldier"). The longer stories, principally "The Snow Queen" and "The Marsh King's Daughter," are real masterpieces of fantasy. Andersen was a true creative artist, rather than a collector like the Brothers Grimm. But in reading him, expect a moist eye more often than a hearty laugh.

GOOD MOVIES: SPRING

by Sheila Benson



Tender Mercies



Night of the Shooting Stars

Betrayal

This crop of films are all of a kind. No big noises nor enormous studio publicity campaigns behind them, yet two on the list are among the most deeply satisfying films I've seen in months and perhaps in years.

Absolute first would be **TENDER MERCIES**, directed by Bruce Beresford and written and coproduced by Horton Foote. If America had "living treasures" the way Japan does, Foote would be one. His quiet, mostly Southern-regional films and plays, which include **Trip to Bountiful**, **To Kill a Mockingbird**, and the fine, little-known **Tomorrow**, have their own way of lingering with audiences. Now **Tender Mercies**, with Robert Duvall (whose finest film work before this was **Tomorrow**), Tess Harper, a new and glowing actress, and Betty Buckley, crowns the list.

It is a minutely observed story about a legendary country singer (played and sung by Duvall) who's been brought down by the bottle and a ruinous marriage to another performer (Buckley) and is attempting to start his life again with a young Vietnam widow (Harper) and her son (Allan Hubbard). As Mac Sledge, who "never allowed himself to trust happiness – never did and never will," Duvall is shattering. Fleshing out every nuance of Foote's spare, pure script, Duvall truly becomes a man who has fallen away from and denied his creative side and at the same time mourns for it. It is a magnificent performance, all the greater for its utter simplicity.

What distancing we get in the film comes from Beresford's habit of placing his camera low, emphasizing the isolation of the Mariposa Motel setting between Austin and nowhere. We eavesdrop, catch conversations from across a room or from the other side of a dirt roadway. This bit of self-consciousness aside, Beresford has chosen his ensemble with the greatest care; they are, each one of them, splendid, as are every one of the film's details – from the songs Duvall sings (some of them written by Lefty Frizzell) to the two-step with which he leads his young wife onto the dance floor. **Tender Mercies** is as authentic in its way as **Payday** was, and its concerns are deeper and more lasting.

* * *

NIGHT OF THE SHOOTING STARS is a jagged, amazing film by the brothers Paolo and Vittorio Taviani, who gave us **Padre Padrone** six years ago. Set in the chaotic last moments of World War II in Southern Italy, it is 1944 as seen by a six-year-old girl, to whose eyes "everything was *so* unusual." Unusual, barbaric, comic, anecdotal and epic, all at once. Told that the Germans have mined certain marked houses in their village to be blown up at three a.m. but will offer safety in the town cathedral, half the villagers stay, the other half take pell-mell to the roads out of town. Pathetically searching for the American troops reported advancing, they become caught between retreating Germans and last-ditch Italian Black Shirts.

One of the things (besides its entirely original and pungent episodes) which links **Shooting Stars** to **Padre Padrone** is its marvelous use of music. **Padre Padrone** uses the Blue Danube Waltz, finally crackling out of a homemade radio and fulfilling a promise made by an almost savage Southern Italian soldier that he would broaden his horizons, become part of the so-called civilized world. In this film the Tavianis use sections from Verdi's "Requiem" as well as "The Battle Hymn of the Republic," supposedly being played by the advancing American troops. It turns out to be only a Victrola record played by one of the elite of the village as a joke on his fellow townsmen, but the sequence and the effect the music has are electrifying.

The cast of characters is very large but so carefully detailed for us by singular, revealing incidents that by the film's end we mourn the lost ones like family members. Never losing sight of their viewpoint, war's inanities as seen by a child, the Tavianis have created an extraordinary film, magical, realistic, as hard as reality and as fanciful as a child's imagination.

* * *

If **BETRAYAL** had been released a little earlier it would have done immeasurable good for Ben Kingsley's chances at an Oscar for **Gandhi** since it demonstrates so brilliantly another portion of this classically trained actor's range. In what is virtually a three-person film from Harold Pinter's play and with his own screenplay, Kingsley is riveting as a faintly upper-class publisher who is being betrayed by (and is perhaps betraying) his elegant, intelligent wife (Patricia Hodge) and his best friend (Jeremy Irons). What is interesting in comparing Kingsley's two performances is not only how different they are but in what ways they are similar. Kingsley's concentration, a fixed quality which was so benign in **Gandhi**, is here again, only this time it turns, or is on the edge of turning, dangerous.

Betrayal is told backwards (the only way that we see life, since we certainly can't look forwards, thank God) from the point that a marriage breaks up to the instant nine years before when a spark leaped between the two married lovers. It is a sinuous, sophisticated and disturbing look at love's impermanence. It isn't truly a film but a splendid play turned into one, yet in the presence of three performers like Irons, Kingsley and Hodge you forgive a great deal. It is director David Jones' first feature and it must easily be producer Sam Spiegel's hundredth, or something very near. (**On the Waterfront**, **Bridge on the River Kwai**, **African Queen**, **Lawrence of Arabia**, and so on.) Both are to be congratulated.

* * *

COME BACK TO THE 5 AND DIME JIMMY DEAN, JIMMY DEAN has already decorated several Ten Best Lists (mine included) but for our timing it came too late to be included in the last issue and I'd hate to lose it. It is absolute proof that triumph can be wrested from disaster. From every account it worked badly as a play with the same cast – Cher, Karen Black, Sandy Dennis – and with the same artful director, Robert Altman. But that's because it was born for film, to glide from one point of view to another, to direct our attention to a listener while someone else is speaking, to use the fluidity of a camera and the rhythms of editing. Ed Graczyk's play is about as nourishing as a Coca-Cola and as familiar. The twentieth reunion of the Disciples of Jimmy Dean, taking place in a fly-speck of a Texas town, has overtones of every early play by Tennessee Williams or William Inge. It is about Shattered Illusions, Brave Hopes, Candor and Self-Deception, and it is really fairly awful. But the whole cast has dug down and imbued their characters with such love and such a wealth of detail and personal observation that the whole, preposterous thing works. It's almost unfair to single out one performance, but Cher's may be a revelation to those who weren't actually *listening* when she used to do her comedy monologues. Highly recommended.

* * *

STAR STRUCK, a goofy, energy-filled Australian entry directed by Gillian Armstrong (**My Brilliant Career**), carries with it exactly the same cut-on-the-bias wackiness as **A Hard Day's Night**, although it isn't as much a made-in-the-camera product as was the Richard Lester film. Using a cosmetic version of punk, so tame it's like middle-of-the-road pop to our ears, it's the saga of a pair of cousins, she 18 (Jo Kennedy), he 14 (Ross O'Donovan), who scheme shamelessly to get her singing talents recognized. He is an engaging, demoniac entrepreneur, a Billy Rose in knee pants; she is rather like a mix of the very young Streisand and Bette Midler. There is a subplot about the older generation being thrown out of their family-owned pub which makes the film reminiscent of both **Funny Girl** and **You Can't Take It With You**.

For non-Australians, the settings and the grand openness of all the characters is like a breath of fresh air. A large percentage of American movies being made now have exactly the scale and feel of tepid television. Like **Night of the Shooting Stars**, this film, which is raw, energy filled, full of love and full of wonder, makes you feel a little better that movie making isn't caving in entirely.

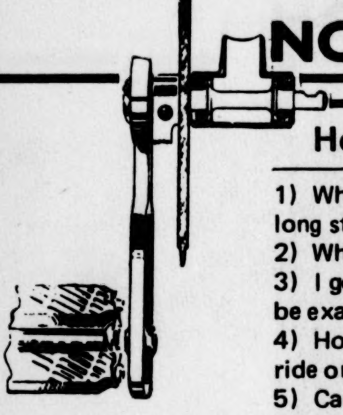
* * *

Once in a while when you write about film you feel there are only so many words to use, and Andrew Sarris took exactly the right ones to describe **CELESTE**; he called it the greatest homage one art form could pay another. And so it is. Taken from the memoirs of Celeste Albaret, Marcel Proust's devoted young housekeeper for the last ten years of his life, **Celeste** is deceptively low-key. We rarely leave the shrouded Paris apartment where Proust worked; there are deliberate moments where Celeste simply waits for Monsieur to ring. And much is made of ticking clocks and creaking floorboards. Yet life hums inside **Celeste**. Somehow in this monumental stillness the torment, the anguish, and the energy propelling that pen on the other side of the heavily draped door seem always about to spill over onto the screen.

Come Back to the 5 and Dime Jimmy Dean, Jimmy Dean

Star Struck

It is the work of a German director, Percy Adlon, previously a documentarian, and as Proust and Celeste he has used Jurgen Arndt and Eva Mattes (familiar to some for her work with Herzog and Fassbinder). Every element is perfect; the Paris we glimpse could be Atget's or Lartigue's, but art direction is not used to smother us for its own sake. Every beautifully perceived detail is matched by an equally subtle moment of character revelation. If there is an irony to the film it is that in a medium which Proust almost anticipated himself in his overlapping use of memory, he himself is caught, and the delicate devotion between Celeste and her Monsieur is preserved with humanity and Proustian purity. ■



NOMADICS

How Did You Bike Across America?

1) What did you think about while you were riding the long stretches?
2) Where wouldn't you want to sleep again?
3) I got off my bike and walked it several times (three to be exact). Did you?
4) How did you find out which roads were best to ride on?
5) Can anyone ride a bicycle across America, or does it take a special person?

These are standard questions that everybody asks you. At least they asked me when I rode across the continent. But somehow I never tired of answering them, and strangely I'd always ask other bikers the very same questions. So I made a survey and sent it to as many bike vagabonders as I could find. More than a hundred completed it. Each had separately pedaled their bicycles across America at least once. Several have done it three times. While all the results are not yet tabulated, from what I've seen it's safe to say that:

- You can expect one flat per 1000 miles.
- You can sleep for free in Jartran and U-Haul trailers.
- You won't lose or gain weight.
- You won't get bit by a dog or hassled by traffic.
- Your total cost — food, beer, "lodging," photos — will be $0.15 per mile.
- Nothing sold will keep you dry when it rains.
- You won't use more than four pounds of tools.
- Turtles will be the most common dead animal you'll see.

It's not too late to answer my survey. If you've bicycled across the continent, send me a stamped, self-addressed envelope at Nomadic Books, P.O. Box 454, Athens, GA 30603. I'll send you the full 40 questions and, if you respond, I'll let you know the results.

Kevin Kelly
Athens, Georgia

Touring Exchange

Bonnie Wong's **Touring Exchange** *(founded in 1977) serves as a clearinghouse of bicycle tours done by fellow cyclers. It enables you, John or Jane Pedalpusher, to share the ride you made to Ixtlan or wherever with other members of the Exchange. Bonnie wants your tour condensed to a certain format (which requires information on the tour's length, the best time of year to make the ride, traffic and weather conditions, and more) and wants a good, clear map of your route. When you meet these standards, you'll become part of Bonnie's "chain reaction" of cyclists.*

The 1982 catalog lists about 120 tour guides (covering 45,000 miles) in 19 states and seven countries. Bonnie updates the catalog each November and personally leads many TE-sponsored group tours (these cost $40-$600.)
—Daniel Wesolowski

Touring Exchange
Catalog
$1 postpaid from:

Touring Exchange
P.O. Box 265
Port Townsend, WA 98368

Tour #	Country	Start Finish	Miles	Days	Camp Hostel Motel	# Pages Maps Itinerary	Submitted By	Date Rec'd.
			FOREIGN TOURS					
3	Baja	Tijuana Cabo San Lucas	1100	-	c	4-I 4-M	Bob Wagner Bonnie Wong	4/77
124	Baja	Tijuana Cabo San Lucas	1100	15-21	c	6-I	Garry Gamber	7/82
51	Canada	Banff Jasper	180	6	h	3-I 1-M	Canadian Hostel Assoc.	2/79
95	Canada	Calgary Seattle	1140	20	c&h	2-I 2-M	Kathy Steffen	9/80
118	Canada (Nova Scotia)	Halifax	770	18	c	4-I 3-M	Bill Gutowski	1/82
50	Canada	Jasper W. Glacier, MT.	500	11-14	c	3-I 1-M	Ronald Moore	2/79
77	Canada	Vancouver, B.C. Libby, MT.	850	15	c	2-I 1-M	Kirk Wittorff	10/79
12	Guatemala	Guatemala City	600	14	m	2-I 1-M	Norman Ford	10/77
61	Guatemala	Guatemala City	200	14	c&m	4-I 2-M	Touring Exchange	4/79
100	Ireland	Dublin	500	28	B&B* h	8-I 1-M	Robert Crawford	9/80
116	Ireland	Limerick	750	21	B&B h	5-I 1-M	Touring Exchange	10/81

Sturmey Archer Five-Speed Hub

Anyone who has undertaken to remove mud (or, as I recently did, a yard of poison ivy vine) from a derailleur will appreciate the logic of this completely enclosed gear hub. Other attributes are that all parts run in oil; no easily damaged little dingbats are exposed to assault; the chain is always straight-line (on "ten speeds" the chain is at such an angle in some gears that using them is silly); and shifting is sure and accurate. In short, all the attributes of the familiar three speed but with a higher high and a lower low. What you pay for this is less of a range between high high and low low, wider space between the ratios (meaning that the perfect ratio for the hill you are climbing may not be there), and weight. There are those who say this transmission won't take a mountain bike beating, but Bill Siler, who brought this device to our attention, has used his on a mountain bike for more than a year and had no trouble. For city bikes it can't be beat.
—J. Baldwin
[Suggested by Bill Siler]

Sturmey Archer
Five-Speed Hub

$70 (approx.)
special order through
most bike shops

Touring Cyclists' Hospitality Directory

John Mosley offers a state-by-state listing of fellow-cyclers who will give "crash space" and a shower to touring cyclists in their area. The catch is that to get the listing and receive some hospitality, you must agree to be listed and be hospitable. I used the directory extensively when I toured the South, and liked the experience a lot better than RV-laden campgrounds, cheap motels, sacking out in the fields, or any combo of the latter. I stayed dry. I saved money. I made some friends. —Daniel Wesolowski

Touring Cyclists'
Hospitality
Directory
John Mosley

$2 postpaid from:
John Mosley
13623 Sylvan Street
Van Nuys, CA 91401

The Palenque Traveler

The accent is on bicycling-in-Europe news. For this it is perfect. Also functions as a grapevine for Continental-bumming-around news. For that, it's a good buy for high-frequency European vagabonders. There's a little too much peddling of the paper's own bike tours for my like; on the other hand that's kept them so busy that they haven't ruined decent travel news with "good writing" — you get straight talk that is current, factual, and (most refreshing in travel literature) to the point. —Kevin Kelly
[Suggested by Kate Westmoreland]

●

We're pretty emphatic in our *opinion* that Eurailpasses and biking do not mix, or should not mix. If you are going to be biking much at all, you will be hard pressed to

Adventure Cycling in Europe

Among the converts, this is the only way to go. Not only is biking Europe increasingly fashionable, it also makes visiting countries in Eastern Europe and Scandinavia financially possible. Any bicycle will do. (You won't save any money buying one there, and renting one is outrageous — best bring your own. The airlines will fly it as part of your luggage for a few bucks extra.)

Can you buy 27-inch tires in Spain? No, says this excellent book, bring spares there. It follows that up with most of what you need to know to propel two wheels around the continent in pursuit of happiness. Every country is catalogued in turn: the lay of the land, the conditions of roads, and the expected cost per day, among many other tips. As a seed a few suggestions for tour routes are given. A lot of this very detailed information becomes obvious the first day of arrival. But when you're sitting at home ignorant of what's out there it's easy to plan some whopping stupid mistakes. With this friendly book that shouldn't happen. —Kevin Kelly

Adventure Cycling in Europe
John Rakowski
1981; 352 pp.
$11.95 postpaid from:
Rodale Press
33 East Minor Street
Emmaus, PA 18049
or Whole Earth Bookstore

ADVENTURE CYCLING IN EUROPE

•

Bike safety overseas is directly correlated with two factors: the experience the country has with motorized travel, and the number of bicyclists on the road. The happiest combination is in the Low Countries along the North Sea. In Belgium, the Netherlands and Denmark most drivers are skillful, polite and safety conscious. The great number of bicyclists everywhere insure attention from motorists, most of whom are bikers themselves. A biker's right to the road is assumed. . . .

The worst is a country that has suddenly discovered the car. Poland is a good example. Until a few years ago, most roads held hay wagons and motor scooters. Then the Polish Fiat, Serena, and other auto plants were constructed. They spewed out thousands of cars to consumer-oriented Poles. Emotionally, and with little skill and much abandon, the drivers took to the roads.

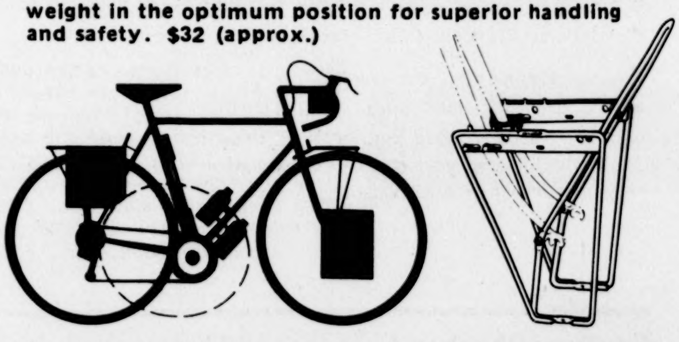
Blackburn bicycle racks

So many bicycle racks are awful wobbly things (as well as positioning the load where it unbalances the bike) that you may think such hassles are part of the game. Not so. Blackburn racks are justly famous for being sturdy and well located. Light too. I use one. Blackburn also publishes a modest report called **The Weight Factor** *which describes their studies on just where the load should be carried on a bike. You might be surprised at the best locations!* —J. Baldwin

Blackburn bicycle racks
Available at most bike shops
Catalog and nearest dealer information
free

The Weight Factor
free
All from:
Jim Blackburn
75 Cristich Lane
Campbell, CA 95008

Rack FL-1: Absolutely the best way to carry weight. Our research proves that use of front lowriders puts the weight in the optimum position for superior handling and safety. $32 (approx.)



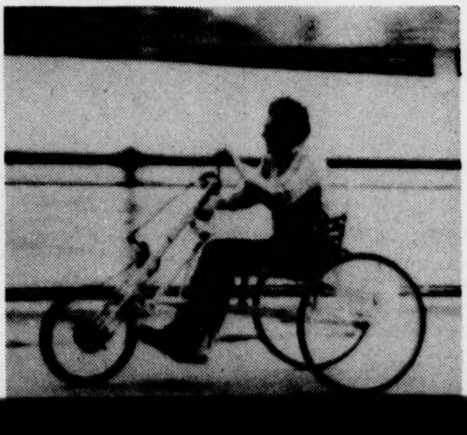
Medium size panniers mounted as far forward as possible on the rear carrier, and medium size bags mounted low on the front forks in the center of the wheel, was by far the best system. This combination gave the best handling with heavy weight. The bicycle responds slower this way than it does with no weight at all, but in most cases is actually more stable. —The Weight Factor

New England Handcycles

At last someone has done a good trike, and a hand-powered one at that! The makers claim that a person with normal arms (though I don't suppose they'd stay normal for long) can easily do 40 miles a day, with 155 miles being the current record. The design is exceptionally clever and well-adapted to urban use: 24 speeds, drum brakes, self-stabilizing steering, sealed bearings, good maneuverability (it can U-turn in its own length of 70 inches), thoughtfully laid out (the driver can reach doors to open them, and the 28-inch width will go right through), and light — only a few pounds more than the ubiquitous Schwinn Varsity "ten speed."

This is an example of a badly needed product that would not interest a big manufacturer. So it's the little shops that get into such things. That means a higher price, but it also means an overall quality that you are unlikely to find elsewhere. These folks even put their names in their catalog. You know that your trike has been made by Chris, Donna, and Bill, and they care about it. (They've also made their own jobs, by the way.) And for the wheelchair-bound, the New England Hand Trike is wings — they'll customize according to your needs. —J. Baldwin

New England Handcycles
Model 324
$1900 plus shipping
Brochure and information
free from:
New England Handcycles
228 Winchester Street
Brookline, MA 02146



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utilize the value of the pass — and most likely would be better off with a point-point ticket where you can stop-off as much as you like en route. (And bike in several different locales along that route.)

THE PALENQUE TRAVELER
NO-FRILLS EUROPE

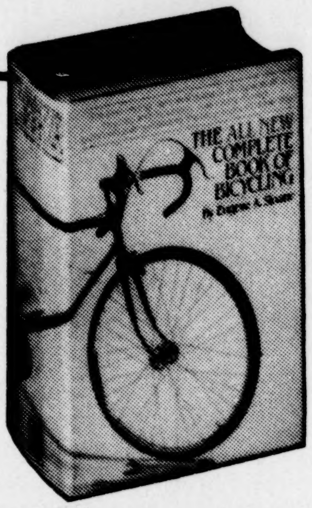
Palenque Traveler
$3/year (6 issues)
from:
Bike Europe
236 Nickels Arcade
Ann Arbor, MI 48104

The All New Complete Book of Bicycling

Most bicycle freaks I know (including myself) recommend Eugene Sloane's book as the best of its kind. Repair instructions are exceptionally clear and well-illustrated. Sloane's unpretentious writing style is refreshing, too; the book is full of examples and anecdotes from his extensive personal experience. —David Woolley

Well, it's not quite all new, but it is extensively updated from the previous (and good) editions. This isn't just a repair book — virtually everything likely to affect bike and rider is covered. It even gets into elementary frame straightening and painting. If you're going to have just one bike book around to help, this one is it. —J. Baldwin

The All New Complete Book of Bicycling
Eugene A. Sloane
1981; 736 pp.
$20.70 postpaid from:
Simon and Schuster
Attn: Mail Order
1230 Avenue of the Americas
New York, NY 10020
or Whole Earth Bookstore



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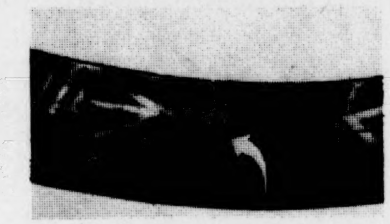
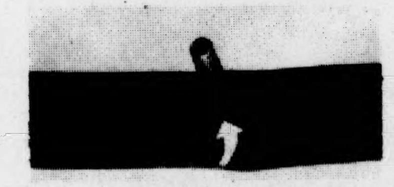
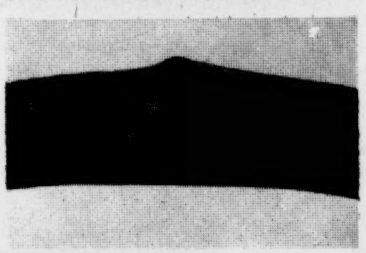
Various tests have been made pedaling with and without toe straps and toe clips. Most of the test results show that with toe clips and straps you increase pedaling efficiency about 40 percent. My own experience bears this out. But just because you have toe clips and straps, and even cleats on your shoes (which you must have to achieve this added efficiency) you are by no means guaranteed this improved efficiency. Clips and straps alone, even with cleats, will do little for you unless you learn to pedal correctly, so that you pull *up* with one foot as you press *down* with the other.



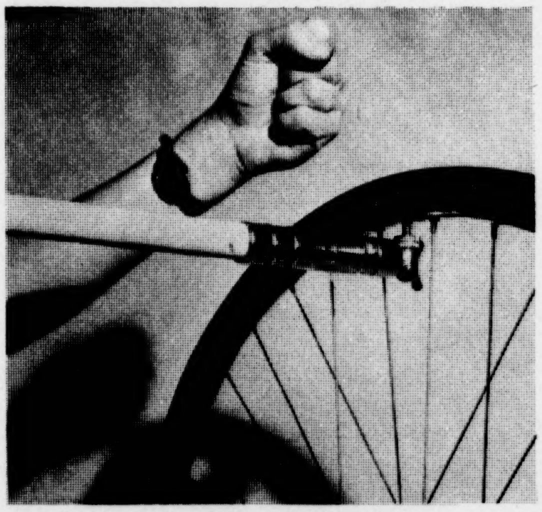
Failure where the tube is joined illustrates a manufacturer's defect. Get your money back, or a new tube.



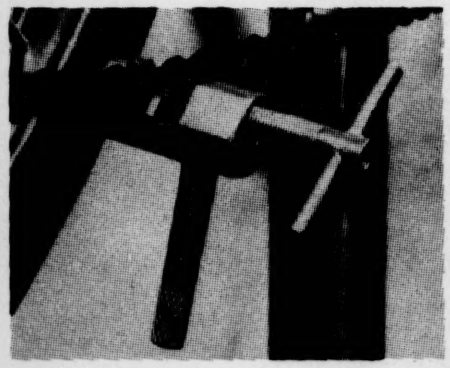
Arrow points to ruptured valve. This is what happens when the tire is underinflated, permitting the tube to slide around the rim.



Blow-out caused by sudden departure of the tire from the rim. Improperly seated tires will lift out of the rim groove, permitting the section of the tube nearest the point of lift-off to protrude and blow out. Illustrates the importance of being earnest about tire-bead setting when mounting a new tire. Older tires have stretched some, are easier to mount so beads drop into rim groove.



Remove pump with a sharp downward thump with the base of the hand, as shown. Don't wiggle pump off valve or you may damage valve tube.



At least once a year, more often if you ride a lot, and certainly before the start of each new spring riding season, check chain stretch. With the chain on the bicycle and with a ruler, measure exactly twenty-four chain links, from center of rivet to center of rivet, or from edge of outer plate to edge of outer plate. If either distance is more than 1/16th inch over 12 inches, you have a worn chain which should be replaced.

To remove the chain, you will need a rivet remover or, as some call it, a "chain breaker," a name akin to a baggage smasher at airports. To use the rivet remover, line up tool point with chain rivet, turn handle five times to leave a bit of rivet still in chain side plate for easier reassembly.

Burley Lite Bicycle Trailer

One reason I don't use a bike trailer much is because of the time I loaded one with builder's supplies to the recommended capacity of the trailer and was just humpin' along when I had to make a hot stop halfway around a curve. No, my problems didn't arise from inadequate brakes; the resultant pirouette was initiated by the trailer hitch transferring the trailer momentum to my seatpost, high, not aligned with my direction. But this trailer hitches low, to the axle, and actually adds weight to that axle in a stop so you don't tend to do over-the-bars so easily. I've only ridden with one a short distance, but even the short ride showed clearly that this arrangement works better than the usual. Yes, you can turn the bike either way despite the asymmetry. Workmanship seems good. —J. Baldwin

[Suggested by Barbara Stevens]

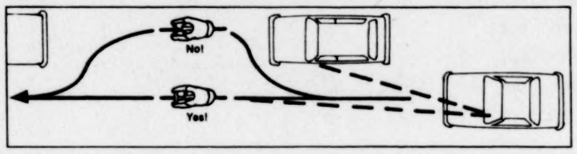
Burley Lite Bicycle Trailer
$200 (approx.)
(Check your local bike shop)

Nearest dealer information **free** from:
Burley Design Cooperative
78300 Pacific Highway So.
Cottage Grove, OR 97424

The Complete Book of Bicycle Commuting

Aptly-titled volume with information on everything from bicycle trailers to bladders, reflectors to rear-view mirrors. Very well organized, easy to read, lots of off-beat comments thrown in (such as advice on matching your pedaling cadence to Beethoven's Fifth Symphony). The book contains all the traffic-riding techniques of **Effective Cycling** *(***NWEC** *p. 410) without the intensive theory of why traffic in this country travels on the right and why the federal Consumer Product Safety Commission should put its reflectors where the sun never shines. Better printing, too. The cover photos may scare off those of us who cycle in flannel shirts and bluejeans, but many of the editorial pictures show the author so attired, like us, riding his beat-up small-wheeled folding bike. There could be more information on how to repair your bike (or what books are good for this), and some material is already outdated (like the author didn't know how to trip loop detector traffic lights, when he wrote the book in 1980). But aside from that, this is the only good book on bicycle commuting available, and one of the few best bicycle books generally. Whole Earth should get rid of its listing for* **The Bicycle: A Commuting Alternative** *(***NWEC** *p. 409).*

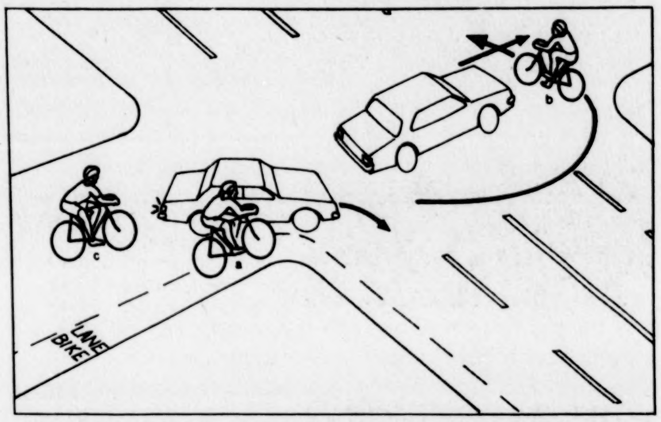
—Karen Missavage



Don't duck in between parked cars, since you become invisible to motorists.

The Complete Book of Bicycle Commuting
John S. Allen
1981; 307 pp.
$9.95 postpaid from:
Rodale Presss
33 East Minor Street
Emmaus, PA 18049
or Whole Earth Bookstore

THE COMPLETE BOOK OF Bicycle Commuting



Bikelanes cause conflicts. a)A bicyclist going straight is in the blind spot of a motorist turning right. b)A bicyclist is encouraged by a bikelane to make a left turn from the right side of the street, which is a very dangerous practice. c)This bicyclist has taken the safest course for either a left turn or straight-through riding, but note that the bikelane narrows the street, forcing this cyclist to slow for a right-turning car.

Bike Commuted Sentences

Monthly eight-page newsletter full of tips, suggestions, reviews, and comments from bicycle commuters across the country. (Didja know that growing a beard keeps your face warm in winter? I'll try it someday.) Editor Mason St. Clair is a dedicated "sandwich" commuter — he rides to the bus, rides that to another bike, rides bike to work. And he's full of ideas and innovations to which a mess of corner-cube reflectors and a glue gun can be put — the man must look like the only two-wheeled Christmas tree in Nashville. Lots of fun to read and write to.

—Karen Missavage

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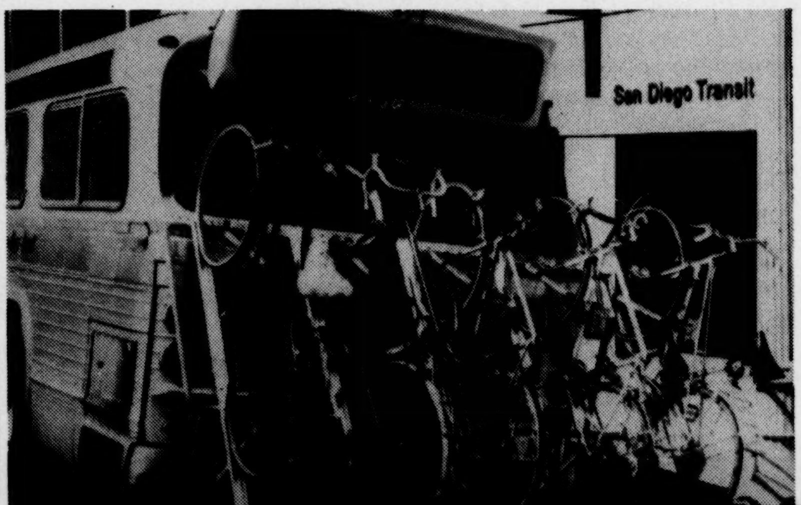
Ask most people, including a lot of bicyclists, what they think would give bike commuting the biggest boost. The answer would be almost unanimous, build bikeways, bike paths, and bike lanes. However were you to ask the same question of people *that bike to work every day*, the answer would be entirely different. One priority of the latter group would be strong bottle bills. For as they know, one of the strongest deterrents to cycle commuting is the huge amount of broken glass on the road.

Bike Commuted Sentences
Mason St. Clair, Editor
$9.60/year (12 issues; includes membership in National Association of Bicycle Commuters)

from:
Bicycling Commuters' Service
2904 Westmoreland
Nashville, TN 37212

U-Lok Transit Bus Rack

For only, um, $1200 your transit service can buy a rack that carries four bicycles (or, for $1350, five bicycles) on the back of any bus. We hear good reports about them, though buses must wait an extra moment as riders put on and take off their bikes. Many's the time I've wished the buses here had something like this. *—Art Kleiner*



Out here in California, smaller communities with somewhat limited bus service (Humboldt County, Santa Cruz) have found the racks especially useful — people who aren't directly on or near the bus lines can ride to the bus. In Humboldt County, cycling advocates petitioned the local transit district to install the racks, pointing out that the increased bus use would help offset the already low cost. Once they began exploring the issue, they found that state funds were available to pay for most of the purchase price. Santa Cruz had a similar experience.

—Joe Kane

U-Lok Transit Bus Rack
Model I
(holds 4 bicycles)
$1200 plus shipping
Model II
(holds 5 bicycles)
$1350 plus shipping

Information
free
All from:
Sunshine U-Lok Corporation
31129 Via Colinas,
Suite 704
Westlake, CA 91362

Toyota Tercel 4x4

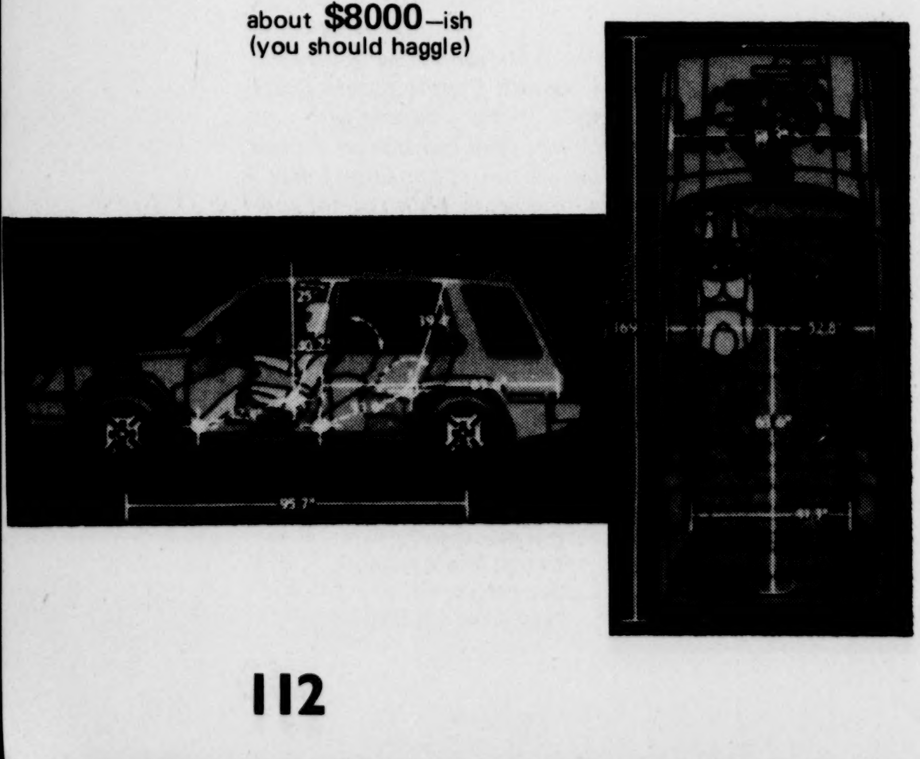
We needed an all-purpose car, and they don't let you import Citroens, with which we'd had great luck for 20 years. What to buy? You'd think the choice would be easy, since the needs are so basic: Lots of room, good economy, frontwheel drive, good creature comfort, decent ground clearance, respectable reliability, and not absurdly expensive (relatively speaking of course). But the choice isn't easy —there are surprisingly few cars that can meet such requirements! After driving many boring and incompetent cars, we settled on a Toyota Tercel 4x4. It has competition from Subaru and American Motors. The AMC can be easily written off: poor load space, great gas hunger and ridiculous price. The Subaru suffers from silly fastback styling on the wagon (we don't often need to carry triangular loads) and poor mileage in California form. Not all that roomy either, and rather agricultural in character. But the Toyota is another matter, and we think it is a new sort of car — the first of a new breed of extra-useful and competent cars.

It's loadspace, upholstered in Clownsuit Plaid, is bigger than any other small car, and is cubical. The tailgate opens clear to the bumper. (Ever wrestle a 100-lb. feedbag in and out of a typical hatchback or conventional trunk?) Rear seat legroom is enough for real adults with legs. The machine is quiet, smooth, and entirely free of uncouth 4x4 overtones yet the thing will go straight up in its sixth speed creeper gear. Ground clearance is a generous 7½ inches. (For comparison, a Rabbit's is 4½" empty). The Tercel is normally in frontwheel drive, in which it behaves in a peppy, pleasant, civilized manner, though sporty types will find it to be the usual Japanese Gerbil. A very high fifth gear gives quiet cruising, and we have been getting around 36 mpg in mixed driving —better than the claimed 31 mpg average (40 highway). To use the 4x4, you merely flip a little gear lever at any speed, and you're in or out. It isn't an el macho boulder climber; it is entirely competent on nasty rural roads. We find the mud performance good, and it's saved us much unhappy slogging. Reliabilitywise, Toyotas are reputed among the best. In the first two months of ownership, we've found this to be true. Only a faulty hubcap and an out-of-balance tire have marred our otherwise very pleasing relationship. We think the thing is funny looking just like a VW Beetle (which, amazingly, is the same length!).

This isn't a recommendation, friends, at least not yet. We'll keep you posted. And we woulda bought American if Detroit had made one like it. But they don't.

—J. Baldwin

Toyota Tercel 4x4
about **$8000**—ish
(you should haggle)

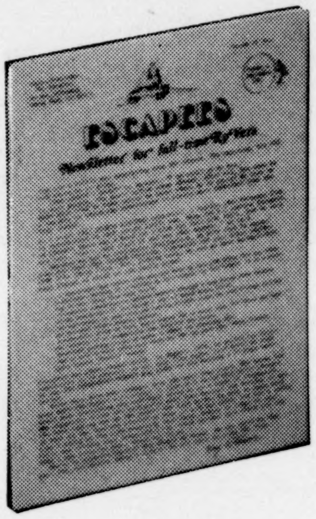


Escapees

This is a modest but very useful newsletter for folks who live full-time in a "Recreational Vehicle." Mutual problems are discussed, good camp spots indentified, nice people to know named and addressed, and enterprises that can be joined by many RV folks are plotted. All by the authors of **Survival of the Snowbirds** *(CQ Fall '82) and* **Home is Where You Park It** *(now back in print, yea!). This is a good idea and the paper (and the Escapees Club that begat it) are growing fast.* *—J. Baldwin*

Escapees
(A Newsletter for
Full-Time RoVers)
$20/year (6 issues)

Home Is Where
You Park It
(Originally reviewed in
NWEC 1st Edition)
Kay Peterson
1982, 2nd Edition;
221 pp.
$8.95 postpaid
both from:
RoVing Press
c/o Peterson
P.O. Box 2870 MCCA
Estes Park, CO 80517



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Spray Cooler for Hot Radiators *by Earl Strang*

You can make your own cooler by using a windshield washer pump which should not cost more than a few dollars at a wrecking yard. A 12 to 18" length of 3/16th copper tubing is drilled to make small holes (not over 1/16") about two inches apart. Crimp one end shut, and run a rubber tube from the other end to the pump which you can mount wherever convenient as long as it's below the level of the reservoir. Mount copper tube horizontally somewhere across the top half of the radiator and several inches in front of it. The fan will pull the water onto the radiator.

The water reservoir can be a plastic jug, or, on a MH, you can tap into the rig's water tank. To prevent leaking when not in use, the reservoir should be lower than the copper tubing. The final step is to connect the pump to the battery with a suitable switch that is mounted within reach of the driver. A few squirts are usually enough. A cupful of water will do a lot of cooling when it evaporates on a hot radiator.

MCCA Worldwide Mail Forwarding Service

For folks on the move or who otherwise have mail problems, this is a service that gives you an "address" as well as forwarding your mail. They also receive and give out phone messages like a standard answering service. You can register your vehicle in Colorado through them, giving you a hassle-free long time on the road without reregistering. They'll of course forward your mail when and to where you ask, in their company envelopes. We hear that they do a good reliable job. They have a toll-free number: (303) 586-4120 (collect) in Colorado, (800) 525-5304 elsewhere. And they don't sell mailing lists. . . .

—J. Baldwin

MCCA Worldwide
Mail Forwarding
Service
$45/year (approx.)
information

free from:
MCCA
P.O. Box 2870
Estes Park, CO 80517

Sani-fem

Sani-fem is a way for women to pee like men. It is a plastic, funnel device shaped to a woman's body so you can stand up facing the toilet. In a tent on your solo ascent of Mt. Everest it could come in quite handy and there are other applications as well. Some of my co-workers suggest: writing your name in the snow, using when public toilet seats are too gross, long car trips. . . . Seems most useful to me as a backpacking item. We have experimented with it here at **CQ** *and it works.* —*Andrea Sharp*

[Suggested by Elyse Axell]

Sani-fem
$6.75 postpaid from:
Sani-fem
Box 666
Downey, CA 90241

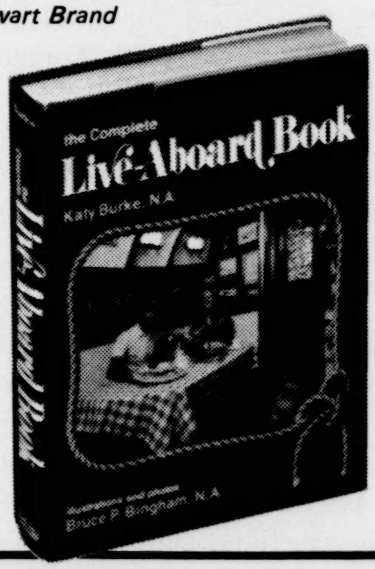
The Complete Live-Aboard Book

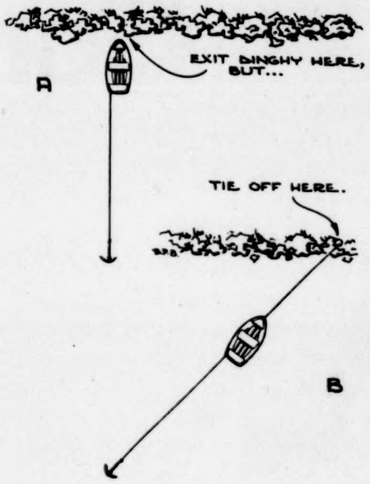
It's always a pleasure to report a better item than one we've previously reviewed. This book thoroughly replaces **Living Aboard** *(***NWEC** *p. 435). It's big and expensive, but there's lots to be said on the subject of miniaturizing your entire lifestyle to utter floating mobility. Once you've made the initial capital investments it can be pretty inexpensive — the authors managed on $200/month on one boat, $700/month on another, including serious voyaging. It is a life of non-stop ingenuity, quiet rewards, unusually close companionship.*

The book is beautifully illustrated by Bruce Bingham, a world-class nautical penman who lives aboard with author Burke. Among the nits covered that will drive you mad if you don't get them right are: dinghy, ventilation, electricity, TV, plants, pets, kids, mail, anchoring, wintering, stowage, etc. etc.

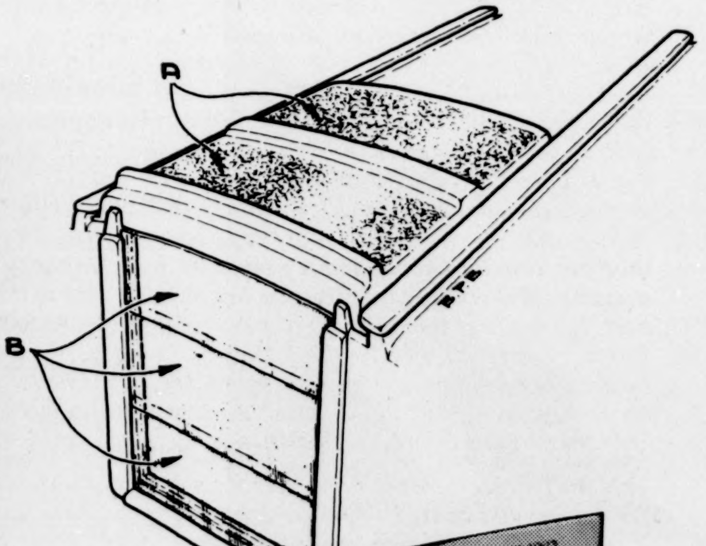
Tip: try living on someone else's or a rental boat before making any plunges. —*Stewart Brand*

The Complete
Live-Aboard Book
Katy Burke, N.A.
1982; 384 pp.
$39.95 postpaid from:
Seven Seas Press
524 Thames Street
Newport, RI 02840





Set a dinghy anchor by dropping it and rowing in a straight line to shore (A). Step out and tie the dinghy at an angle to shore (B).



Sanding the gelcoat off of a fiberglass hatch will make it translucent (A), and cribboards can be replaced with pieces of Plexiglas cut to size (B) for even more light.

International Employment Hotline

There are two ways to work your way around the world. One is to travel until you meet a job you like, then stick with it until you're rich enough to breeze across the border to the next one. The other, more sure, is to bank on a skill you have and sign yourself up before you leave. Inflexible employees picture overseas "assignments" as hardship; should you have an opposite view check out this newsletter — a monthly summary of international opportunities. It's an honest, up-to-date bulletin board of employers with specific needs for people or bunches of people. The jobs are real. You contact the potential boss yourself from the address and phone number printed in the newsletter. Any skill you have is needed somewhere, including the remarkable ability to speak English. Most overseas jobs of this type require you to stay two years. That's just enough time to stash away a comfortable pile of dough, exhaust the local pleasures, and be ready to move on. —*Kevin Kelly*

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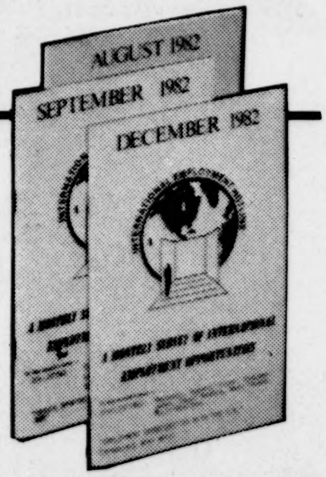
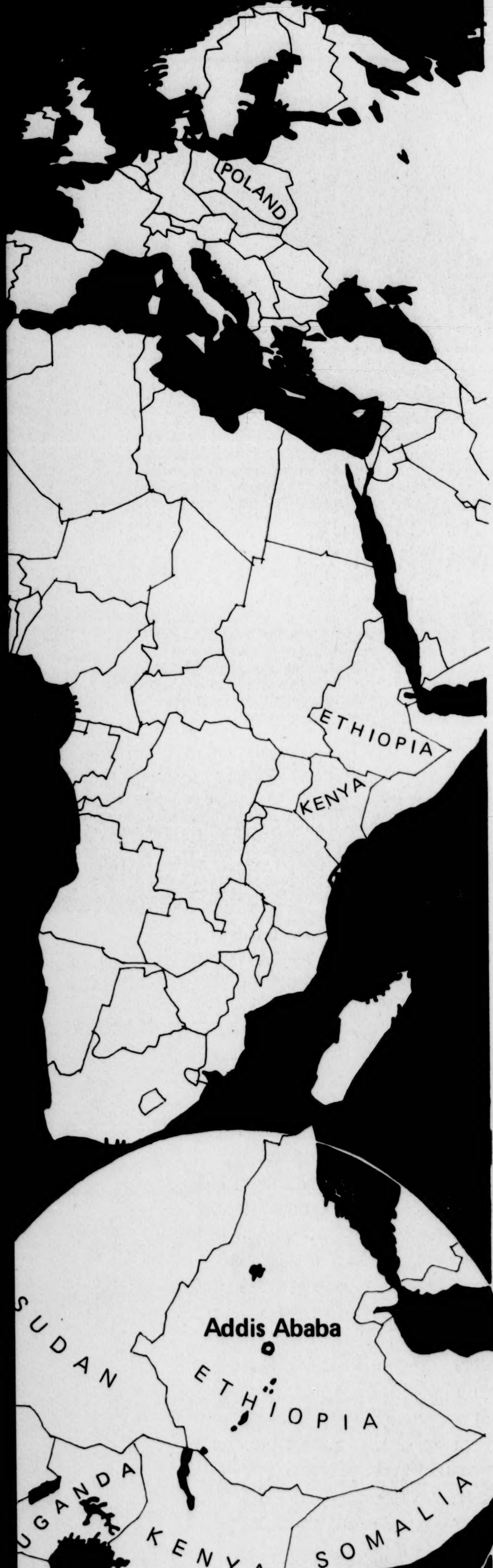
EGYPT: **Working Manager** — with Chemistry background and experience. **Certified X-Ray Technician** — with EMI CT Scanner experience. Positions offer good salary, tax benefits, free housing, travel. Contact: Holbrooke, Hamilton & Associates, 2310 Mason St., No. 3801, San Francisco, CA 94133.

FRANCE: **Typist** — with experience, able to start immediately. Bilingual French/English, English mother tongue. Forward photo, resume, and handwritten letter with salary requirements quoting reference No. 47796, to: PUBLICTE ROGER BLEY, 101 rue Reaumur, 75002 Paris, France.

International
Employment Hotline
Will Cantrell, Editor
$26/year (12 issues) from:
International Employment
Hotline
4216 West 12th Street
Little Rock, AR 72204





DONALD RYAN

Letter from the Oldest Continent

by Peter Warshall

Dear friends,

Sitting here in the Addis Ababa Hilton waiting for permits from the Ministry of Security, Provisional Military Administrative Council of Socialist Ethiopia. Permits for travel are difficult to obtain. We have been waiting for fifteen days. Always, while traveling, I revise my whole earth view. It seems to be the greatest pleasure of aging – knowing that the last time I was in Africa (18 years ago), I saw so much less. The Hilton provides White Rose Brand toilet paper (made in Tientsin, China) and Bulgarian marmalade. The Ethiopian people like to smoke Winstons and drink Coke.

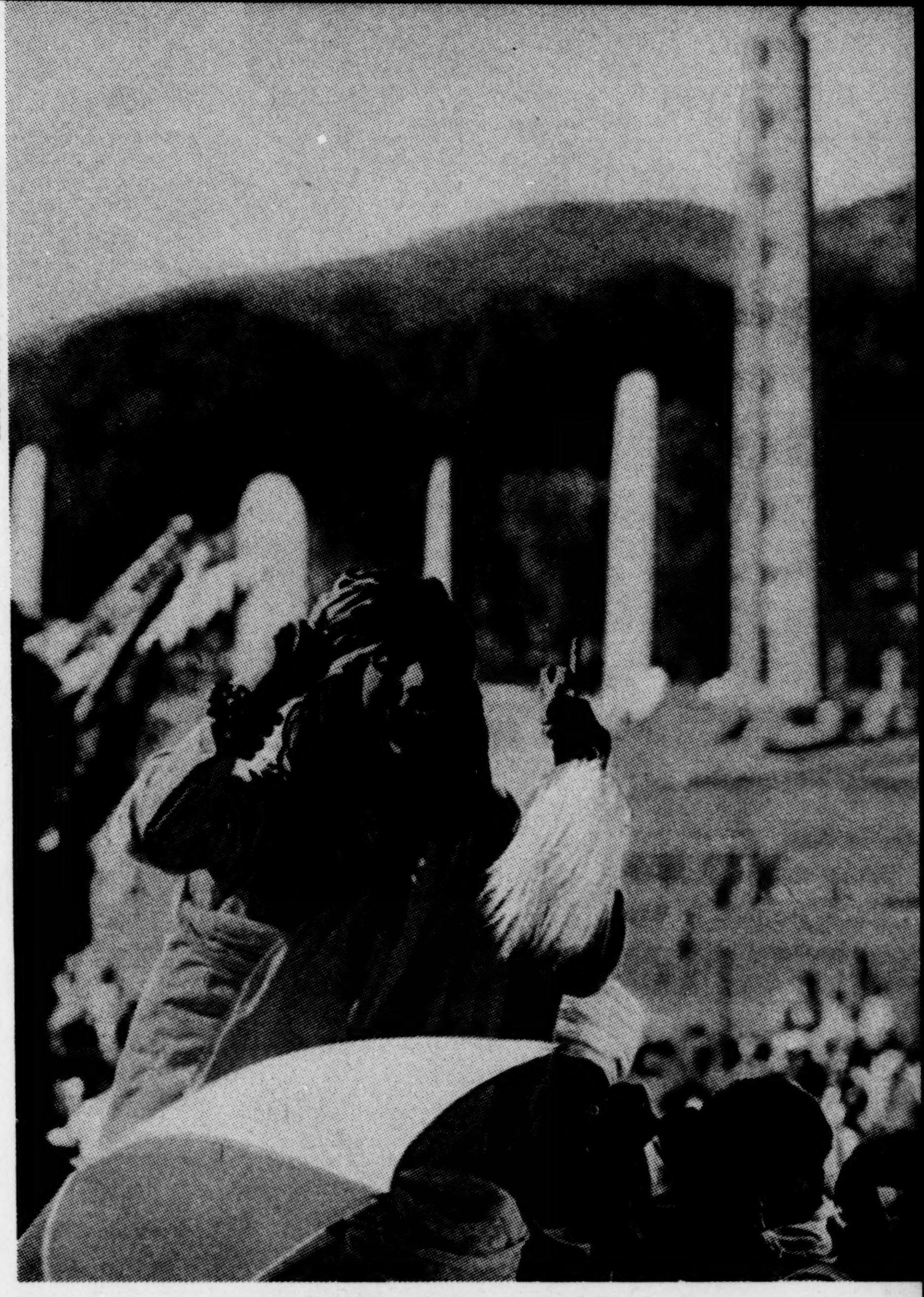
Earth History: Africa is an old and mellow piece of crust. As opposed to North America, you don't have to learn about endless oceanic invasions of the land nor glaciers tearing apart old soils and creating and recreating the shape of the continent. Africa, as a tectonic place, has had few upheavals. Except for its edges, it has been above sea level since the Cambrian. To feel the continent, you enter the realms of pluvials filling gigantic lakes and inter-pluvials (dry periods) when the Sahara grows and the lakes shrink. You focus on the Congo basin as the ancient cradle of the continent that brought forth the planet's richest mammal fauna, richest primate fauna, and richest variety of antelopes, gazelles, and other even-toed ungulates. Just down the Great Rift Valley from this hotel, "Lucy," the oldest humanlike skeleton, was uncovered. Just over on the Red Sea coast, two recent land bridges (at the Gulfs of Aden and Suez)

CQ Land Use editor Peter Warshall called to say goodbye around Hallowe'en. He got a sudden offer from the African Wildlife Leadership Foundation to study rare East African wildlife in its wilderness, thus helping to preserve it. This first letter back to CQ, received just before Christmas, rambles through wildlife, city life, and tribal life. Peter was last in Africa in 1964, studying Kenyan baboons.
–Art Kleiner

channeled this great fauna into Asia and Europe. Primates, pigs, elephants and antelopes spread out from Africa. Hyenas, horses, and hippos came to Africa from Asia. A proto-giraffe, rhinos, shrews, hedgehogs, and a quasi-horse (with claws instead of hooves) entered Africa from Europe.

My great love for mammals has returned, cutting a bit heavily into my usual avian spirit. I am here in Ethiopia to see the walia ibex (the Earth's southernmost wild goat); the mountain nyala (the largest antelope to leave the tropical Congo and evolve a high mountain species); the gelada baboon, whose ancestors were as huge as gorillas and a threat to earlier hominids; and the Semien fox, which is not a fox, nor a dog, maybe a jackal, and definitely not a wolf. Yet it looks like our red fox, is called the Abyssinian wolf, and barks like a terrier. In short, the meditation of Africa is the mystery of origins and richness – back, back into very ancient parts of consciousness. There are soils in Africa over 100 feet thick.

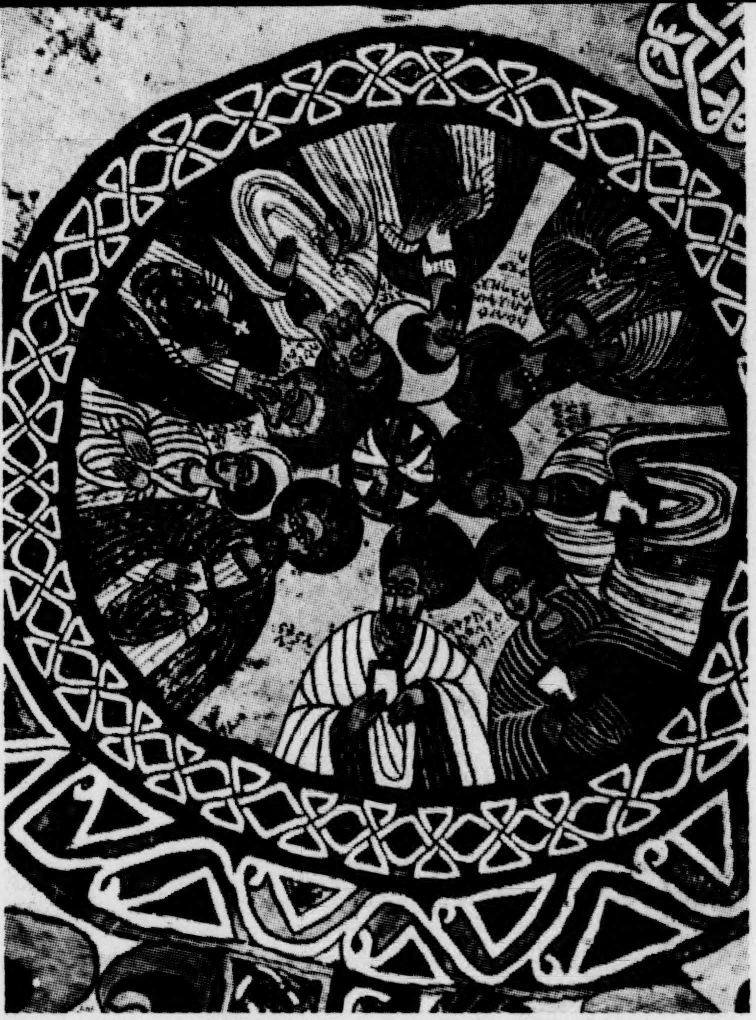
This ancientness cuts new thoughts. For instance, it is frivolous to talk about "untouched wilderness" in Africa. Humans and their livestock have been around too long. Only in that cradle, the tropical rainforest of the Congo, do those words ring true. The savannahs (many kinds) include the primate *Homo sapiens* and their mock-wildbeast, the cow. African pastoral people had worked out a kind of peace with the "Big Cows," like the migrating elephants, zebras, and the gnu, a peace that North American Anglo-Europeans could not tolerate: the wanderings of the bison are over. African pastoralists (with goats, cows and donkeys) just moved around with the great herds. Now, the nationalist governments of Kenya, Sudan, and Ethiopia want the pastoralists to settle (like the U.S. settled the Cheyenne). Settling will ensure military control and bring cattle into the national commodity market. This recent development (since I was last here) has meant that elephants cannot be tolerated, since they break down fences and eat tons of crops (. . . i.e., migrate). It is the human settlement program (even more than ivory poaching) that will decimate Africa's herds of wildlife. Similarly, the baboon (whose eco-cousin is the raccoon) steals into the crop fields in wise and wily ways. So they too must be shot out. America destroyed all this movement in less than 200 years in order to cultivate the Great Plains. Africa has just started its reduction of wildlife in order to provide space for agriculture and more humans.



GERSTER/ETHIOPIAN TOURISM COMMISSION

Priest at Axum, Asmara, Ethiopia. Here is the origin of dreadlocks, Rasta reggae, and the Lion of Judah (who was Haille Selassie, now dead). Yet, these are Muslims who never smoke.

The human overlay on the East African landscape is a bioregionalist's nightmare. There are over 100 languages in Ethiopia alone. Again, one is heartened by the "mellow" aspects of African history that preserved this linguistic variety. North America has lost more than half of its native languages and still loses a few more every generation. Ethiopia has Christian/Amharics who trace themselves back through the Queen of Sheba to Solomon. Black Jews (the Falasha) with mysterious origins. Muslims who claim to have sheltered Mohammed in his flight from Jeddah. Omotic-speaking animists who have a religion that contains the proud seed of all these recent Semitic branches. Last week, I had dinner with Chokway, a Hamma pastoralist visiting Addis with his anthropologist sponsors. He has his hair parted from ear to ear. The front half is bedded down in a red clay. The back half has two colors of clay and small pieces of hollow bone (like rivets) standing out of the clay. In these, he arranges his ostrich feathers. His ears are pierced in three places and he wears a small red plastic ring (in one hole in each ear). He plays turtle-shell lyre and is the best mimic, essential mimic, of mammalian life (goats, baboons, birds, Anglo-tourists with cameras, et al.) I have ever met. We sat at an old rundown restaurant called Buffet de la Gare, where a strange combo played tunes from the Arab, American, Ethiopian, and European



GESTER ETHIOPIAN TOURISM COMMISSION

"The Eight Apostles" painting in the tomb, Church of Gauhu, Lalibela, Ethiopia. Lalibela is one of the Seven Wonders of the World. Name the Eight Apostles!

A market in Dire Dawa.

HAPTE SELASSIE/ETHIOPIAN TOURISM COMMISSION

top ten. An old Italian played the accordian. There was an Ethiopian sax player and drummer. A Canadian who works for the World Bank sang "Yellow River" and, by request, everyone danced to "Guantanamera." Ethiopians came by our table amazed that Chokway was an Ethiopian. Chokway teased in Hamma: "Why are you talking to me? There are lots of other people here." And Jean, the anthropologist, translated his running commentary into English. Most other people spoke Amharic – the local language of the ruling socialist government and the Coptic Church.

Despite this diversity, Ethiopians have a remarkable sense of identity. Ethiopia has never been colonized (except for the area presently in civil war – Eritrea – which was Italian). Ethiopians show none of the post-colonial neuroses found elsewhere. The contrast is particularly striking between Nairobi and Addis. Kenyans are lonely in limbo. Having given up tribal life and embraced a Britishness, their spirit seems broken. They have mastered many of the tricks of the Western world but, like most Westerners, have found them less than completely satisfying. But there is no way back to tribal, low-tech subsistence, to a commodity- and cash-free existence. No way back to relatively defined marriages and understandings of love. Now, the loneliness is cured by big advertisements saying your true love will be seen in an instant, in a city crowd, and you'll find erotic fulfillment and the middle class in one fell swoop. Kenyan grimness has increased because of an attempted coup last August that shook their sense of being the most "civil" country of Africa. (**Bend in the River** by V.S. Naipal is the best book on East Africa and violence.)

Strangely, Ethiopia does not seem to suffer as much from the post-colonial contradictions. It is much poorer materially and much richer in psychological togetherness. The warmth is infectious and everyone jokes. The ethnic jokes concern Jews who don't like to spend their money and Arabs who are cowards. A cab driver told us about the socialist revolution. "Some students wrote 'Yankee Go Home' on the wall and the next day another student added 'Take me with you.' " All the jokes have delightful and multiple meanings.

I guess my understanding of "The Third World" has greatly improved. Discussions of "disintermediation" and "appropriate technology" kind of fade out. Here, the lingo is "infrastructure" and "viable technology." Americans worry about dissolving and simplifying their economic structures. Africans worry about creating them. Americans look for ways to reduce energy and water consumption. Africans desperately need energy to cook food or pump water out of a well. Africans also need the Western world to remain wealthy. For instance, Ethiopia has a desperate need for hard currency and domestic capital. It needs America to buy its products. Which are: coffee;

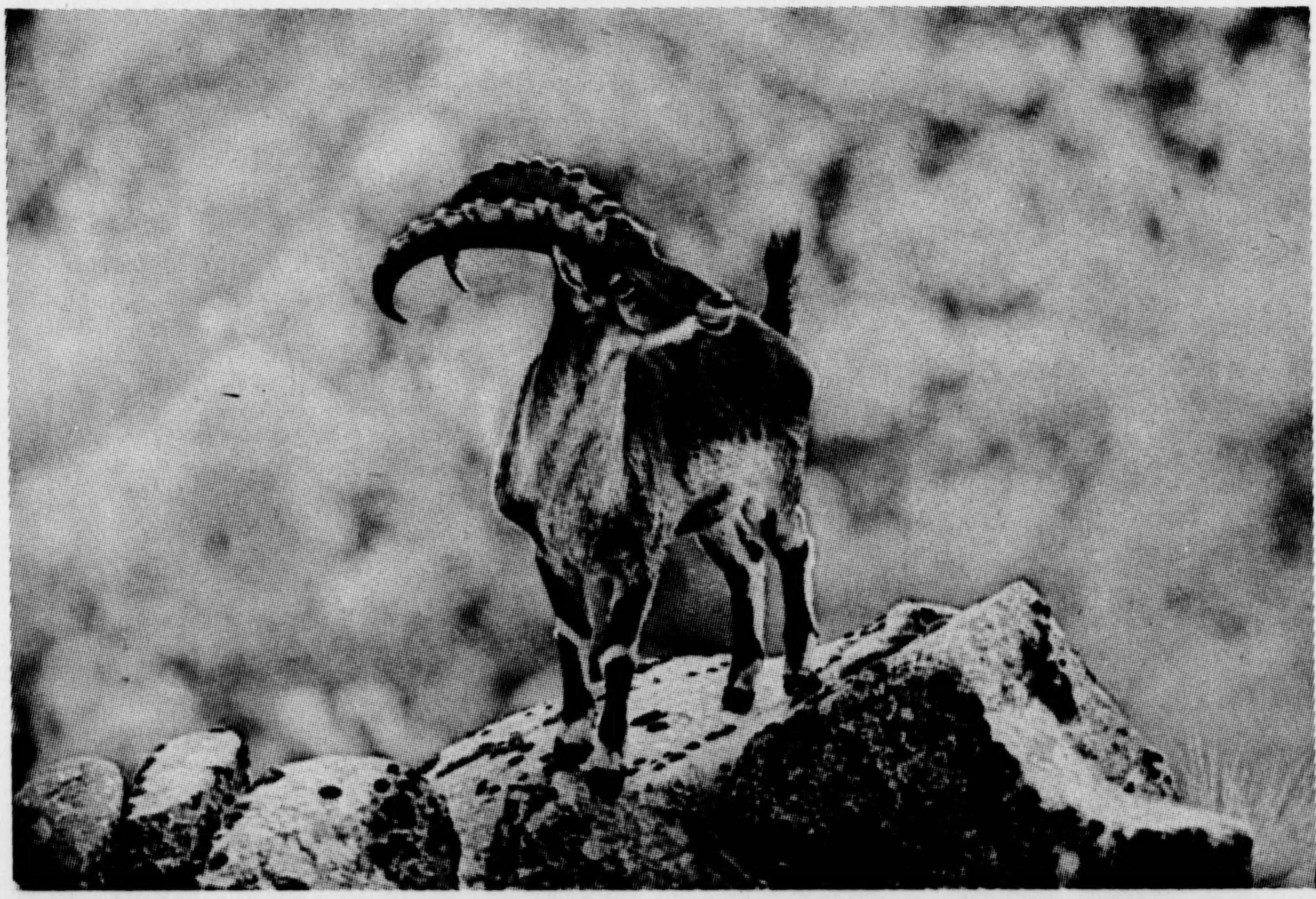
gum arabic and gum olibanum (resins from trees used in paints, confections, perfumes, and medicines); civet musk (the secretion of the anal glands of a catlike creature which carries the odors of Chanel No. 5 perfumes); niger seed (the black seed in U.S. birdfeed – Ethiopians use it for salad oil and cattle feed); handicrafts for the "Pier One" market; and oleo resins from chilis used as an organic red food-coloring and flavoring by companies around Kalamazoo, Michigan. Without U.S. desire for these luxuries, Ethiopia would lose what little hard currency it hopes to earn. (The Arabs purchase "realer" commodities like beef and grains.)

I guess these ramblings can be tied together so: The main reason to save wildlife is to attract hard currency from the tourist trade. Kenya earns over 10 percent of its national income from national parks and tourism. Ethiopia would like to do the same. But it is caught in a double-bind: travel is too controlled to make tourism a genuine pleasure Thus freedom to move, the pastoralists' great tradition, ironically dovetails with the tourists. The preservation of wildlife, so traditional with the pastoralists, also dovetails with both conservationist hopes and the tourists. Agriculturists and wildlife-oriented tourism increasingly are at battle. It is no wonder that the pastoralists like the Maasai, the Dinka or the Nuer have become the "noble savages" of the Western mind, a nostalgic and romantic hope for land-based freedom, harmony with other creatures and personal identity.

So, now, the Equatorial sunset. The light comes from directly overhead. No slanty rays. The cobalt blue is iridescent. The pink floats as if a dusky cloud. Addis has settled down for the night. The white-backed vultures fly by the Hilton from the slaughterhouse to roost. The dusky turtle doves land by the pool for one last drink. The weaver finches nibble left-over crumbs from the outdoor restaurant. The Tecazze sunbird perches upside down on the bottle-brush eucalyptus for one last lick of nectar. Women wrapped in white shawls walk home. Somali women with tattoos cover their faces (except for the eyes). The spice women with their black turbans and powerful gazes close up their stalls. The color of people's skin turns chocolate rose. Street urchins, in falsetto, plead: "Mister, money. No home, please, mister, money." At midnight, the military curfew clears the city. Yet, it strangely seems more ancient, like the closing of the gates of a Medieval Gondar.

Ethiopia has thirteen months. Christ will not be born till January 7th. The year here, by Julian's reckoning, is 1975. On the Equator even the winter solstice feels hardly different from the equinox. So, without reference to holidays and time, my love to you all. Stay tuned for more from latitude 5° N and longitude 40° E. ■

Walia ibex, Semien Mountains.



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SOMALIA
TANZANIA

MO TZU IN KENYA AND POLAND

by Robert Fuller

IN THE MID-NINETEENTH CENTURY THE legal enslavement of individual persons was terminated but aftereffects have persisted for over a century, and may last a century more. In the mid-twentieth century the enslavement of whole peoples was terminated. A mere 20 years later, the aftereffects of colonialism permeate all aspects of life in the former colonies. Upon the withdrawal of the foreign masters, new masters jumped into the vacated (privileged) niches. The

Proviso: These notes — dictated toward the end of our stay in Kenya — do not have the status, in my mind, of "conclusions" or "solutions," even though the language may sometimes sound that way. Rather, these notes are *tentative working hypotheses*, mixed in with a chronology of some of the things we did. The definiteness of language is used to facilitate and provoke dialogue and criticism. Feedback and corrections of all kinds are welcome.

The amateur peacemaking project called Mo Tzu (described in the Fall '82 CQ) continues to explore and thrive. The original Mo Tzu, a traveling peacemaker in fifth-century B.C. China, used a kind of diplomatic aikido to get the Warring States of that time to settle their differences. This Mo Tzu is a loosely confederated team of individuals, whose purpose is to network among people in areas troubled by the threat of war and help evolve and identify "the activities and images which will replace war." At the center of the team is a family: Robert Fuller (perhaps best known as a former president of Oberlin College), Alia Johnson (author of the guide to anti-war activity, "Stopping the Unthinkable," in the Fall 1981 CQ), Noah Johnson (six years old), and Adam Fuller (four).

This fall Robert Fuller went to Poland to see what lessons about peace the Poles could offer since the battles between the Polish government and Solidarity the previous December. Then, accompanied by video documentarians Kim Spencer and Evelyn Messinger, the family traveled to Kenya, which had lived through a bloody attempted coup by its own Air Force four months before. This article, more topical and detailed than the previous one, is based on a report to Mo Tzu's friends and funders dictated by Robert Fuller from Kenya in December. Only one of the photographs was taken by the Mo Tzu team; a former Kenya Peace Corps volunteer named Ruth Snyder and the New York Committee in Support of Solidarity provided the rest. Fuller's own proposal for a new Peace Corps comes at the end of the article. *—Art Kleiner* new masters ("neocolonialists") were Africans (or, very often, Asians who had lived in African countries during the colonial era). Now that the euphoria of decolonization has passed, people are realizing that they have managed only a change in masters. The rage at this betrayal (which draws extra force because it is a kind of self-betrayal) is building, and seems likely to lead to another round of revolutions, this time directed against the neocolonialists. Asians will be driven out, and the privileges of those Africans that govern will be sharply curtailed. These revolutions will not necessarily be communist, but they will be egalitarian. Having broken the transference on the white foreign masters, Africans are moving to break it on their own "strongmen." The most painful and paralyzing stage in the struggle for African liberation lies just ahead: the acknowledgement of one's own complicity in maintaining a pattern of subordination, through a combination of naïvete and lingering desire for the comforts of paternalism.

Our experience in Africa has been a troubling one. Violence is everywhere. We were constantly guarded and often afraid. Three in our party have been attacked, robbed and/or mugged. We have found little evidence of consciousness of the psychological aspects of the changes people are undergoing. Rather, there is a pell-mell grab for power, possessions, and a spurious modernity. It appears that in their desperation people are having to sell their souls.

EVELYN MESSINGER

Robert Fuller and son Adam at a remote spot on the Kenya/Tanzania border, near the Serenghetti plains. Most borders between capitalist Kenya and socialist Tanzania are closed; crossing directly between them is illegal.

It is interesting to compare Kenya and Poland. Both are societies oppressed by their own people. The immediate prospects of neither are very bright. The people in Kenya are not sad (if anything, they are angry), yet the effect of Kenya on me was saddening. In contrast, the people of Poland *are* sad, yet their own *consciousness* of their political and psychological process transforms this sadness. I left Poland with a song in my heart; I leave Kenya with foreboding.

There is at least a four-stage process to decolonization. The first stage is the elimination of the foreign (white) masters. They are immediately replaced by well-situated black masters (and by Asians with a good foothold in commerce). Next, people move from pointing the finger at the foreign white masters to blaming foreign Asian masters. There is now a lot of hostility directed against the Asians in Kenya, as there was in Uganda before Idi Amin expelled the Asians. (That's one thing that many Africans admire about his regime even though there certainly are other things they don't.)

The next stage, the third stage, after the whites and the Asians get the blame, is to blame the black African leaders, who are held to have betrayed the revolution. In countries like Kenya, that stage is just beginning. Finally, the fourth stage is the recognition of one's own complicity in maintaining the whole pattern of subordination. The people here have lived in the fond unconscious hope that somehow Big Daddy would be benevolent, and are now discovering that he isn't.

I see few signs of getting to the fourth stage any time soon, and that is what's depressing about the situation. There is simply not that political consciousness (which is everywhere felt in Poland). Some Polish people do blame their Polish leaders, until you say, "Well maybe the Polish leaders can't do anything different. Isn't it consistent with the facts we do know that they're just obeying Soviet orders so that Poland may avoid a worse fate? Maybe, for all we know, they are ultimately Polish patriots!" They will then nod and say, "Yes, that's quite possible, but we still like to blame them." Which shows that they've got the consciousness that it is they themselves, along with the Polish leaders, who together are unable as yet to mobilize a powerful enough gestalt to hold the Russian armies at bay. And the sadness in Poland

The people in Kenya are not sad, yet the effect of Kenya on me was saddening. I left Poland with a song in my heart; I leave Kenya with foreboding.

Kenya's largest open-air market, in Karatina. The open-air stands are run by native Africans, often farm wives who sell extra produce three times a week to raise uniform money and fees so their children can go to school. The permanent stores behind the market are 80% owned by Asians. Most Asians in Kenya are Sikhs and Hindus; many are refugees from Idi Amin's Africa. They're resented by the Africans for their relative prosperity (they're the middle class), their recent entry into the country, and for what are perceived as mean business practices.

AKI

has precisely to do with the fact that they see in retrospect that they blew a tremendous opportunity to mobilize that gestalt in such a fashion that the Russians would not have been able to intervene. What they did instead was to indulge themselves in the narcissism of the small (political) differences that did exist within Solidarity and within the Polish society; they had a premature Polish spring, so to speak, that wasn't coherent, consistent, and solid enough. In other words, Solidarity lacked solidarity. It didn't have enough solidarity to buttress itself against Soviet threats. But at least they're conscious of that, they admit it, and they say "we blew it," and so what you end up getting is a very lively wonderful conversation drenched in consciousness of their own process, and not just blaming others.

For me, it's been the rediscovery that, as in one's own life or within a personal relationship, the thing that changes the quality of something isn't so much changing the circumstances, but rather adding a fuller consciousness of the circumstances. And where there was that consciousness in Poland there was also vitality and humanity that you could respect and love. And where it's absent, which I'm afraid I feel it essentially is at this particular time in Kenya, there's nothing but heavy-heartedness and sadness, which has been the main emotional response I think of all of us here in Kenya. I have a general feeling of dread and foreboding about Kenya, because when things are unconscious, then what you get is a spasm of acting out through which you see what it is you were unconscious of and through which you finally gain that consciousness. For example, in the attempted coup of August 1, 1982, all the reports say that the soldiers who came in to put it down just fired their machine guns wantonly for the pure childish glee of shooting things up, as cowboys used to do in the West over a century ago, riding into town with guns blazing.

Everything points to the fact that Kenyan society is on a collision course with itself. Morgan said that the abortive coup in August of '82 was really a sign of things to come.

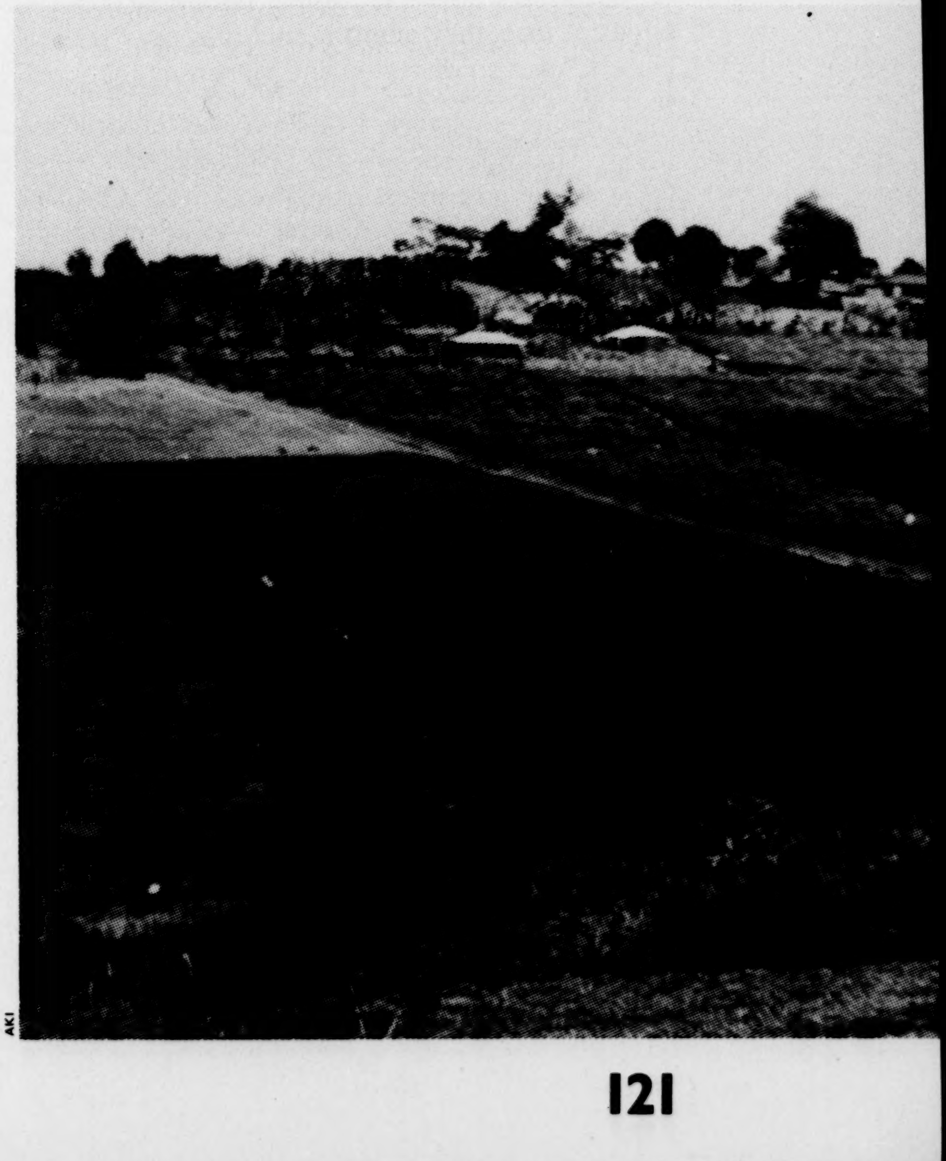
THE DREAM OF PAN-AFRICANISM AND African unity is a long way off, even among Africans. A common view among Africans is that the twentieth century is America's century, the twenty-first century will be an Asian century, and the twenty-second century will be Africa's century. It's an awfully long view. If human history were going to proceed as it has for the past ten centuries, with different nations or societies successively achieving preeminence in the world, then perhaps there might be something to it. But I just don't see the succession continuing like that. Rather, there is being created some kind of planetary meta-national consciousness that will supercede this "parade" of preeminent societies.

I continue to think Africa has some profound contribution to make to the realization of a planetary consciousness, just as black Americans were key to the formation of American consciousness. We've all thought about that and thought of things like their highly developed auditory/kinesthetic faculties, their remarkable three-dimensional sense (as manifested, for example, in their sculpture), and the social/ethical structure within their extended families. So it may be that their contribution lies in areas like these, or some other realm we're not sensitive to yet, and that that will be essential to the fulfillment of human consciousness.

KENYA NOW HAS THE HIGHEST BIRTH rate in the world: eight children per mother, on the average, which is a 4 percent population increase per year. If you combine this with a declining national product, you can see that in just a very few years (five to seven), the average per capita consumption is going to halve, and by that time there's going to be tremendous social unrest and upheaval. There has already been famine in the northeastern part of the country. So everything points to the fact that this society is on a collision course with itself. And from what we hear about Tanzania, everything points to the fact that that society too is on a collision course with itself, even though it supposedly went the egalitarian, socialist route from the beginning. So for different reasons, neither socialsim nor free enterprise seems to have succeeded well in Africa. I come back to the feeling that the most urgently needed thing in the world is a new economic theory and system which combines the incentives that are available in a free-enterprise system with the greater fairness and equity of a socialist system. Hungary, Sweden, and China are attempting to create systems that would in practice synthesize those values. But there seems to be little theoretical work in economics addressing this urgent question. One job for Mo Tzu is to find out why and to try to stimulate research in this area.

A PASSIONATE BANKER

I WAS STRUCK WITH THE PAUCITY and the platitudinous quality of the ideas of almost everyone I met in Kenya, except in the case of a banker who I'll identify only as "Morgan," for his protection. He was the most interesting fellow I met on the whole trip. I was introduced to him by a black American who indicated that Morgan had more insight into the political situation than anyone he's met in the two years he'd been in Kenya. Morgan grew up in a small town out in the country where his father grows coffee. He told me that his father is paid one and a half schillings for a kilogram of coffee, which amounts to about fifteen cents for 2.2 pounds of coffee (which retails at over ten dollars in America). So there's a seventy-fold increase in the price of the coffee as it goes from the farm on which it's grown to Peet's in Walnut Square, Berkeley. Morgan says that most of that difference is absorbed by landowners and middlemen here in Kenya, and that the farmers just won't put up with that much longer. Morgan said that the abortive coup in August of '82 was really a sign of things to come, that it was not just a juvenile outburst, but that it had in fact been well thought out. There were philosophical underpinnings to it that were manifest in the music that was played during the few hours when the rebels held the radio station. And he predicts another attempt, perhaps along the Liberian, Ethiopian, or Ghanian model, where junior military officers take power, throwing out both the political leadership and the senior military leadership, which in Morgan's view is as corrupt as the political leadership. Incidentally, Morgan didn't think that President Moi was necessarily part of the problem. He thought that Moi was doing as well as anyone could do if he were surrounded by a corrupt senior leadership and bureaucracy. Morgan was the only person I met who spoke with passion and with any hope or conviction in the future. Most everyone else seemed to mouth platitudes about progress in the face of much evidence to the contrary.



Coffee plantations near Karatina (the coffee plants are the darker ones). Kenyan farmers are required to sell the three best grades of coffee plants to the government for export; these coffee grades are only available in Kenya as imported instant coffee. The 7000% coffee price markup between farmer and American consumer is a major source of political tension in Kenya.

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I subsequently put Morgan's views to a senior official in the treasury (name withheld) who has helped develop the national economic plan for Kenya, and to my amazement he confirmed them. He says the national economic plan that has just been presented to the president and the Parliament by the Ministry of Economic Planning is seriously flawed, and that the picture presented (by Morgan) of the agricultural sector also applies in the industrial sector – that there, too, the workers are paid a pittance (just like the one and a half schillings for a kilo of coffee). The real money in the industrial sector is made by owners who are exploiting the workers. He said that the situation as I presented it to him is only half the story, that the full story is even worse because the exploitation in industry is as serious as in agriculture. And he too therefore is predicting, in a more guarded fashion, a revolution. He was openly critical of his own superior for forwarding this plan, which he regarded as glossing over such problems.

POLAND

WHEN DAVID HOFFMAN AND I GOT off the train in Warsaw, I was reminded of Moscow because right next to the railroad station was an exact duplicate of one of those five monstrous skyscrapers that Stalin erected in Moscow after the war. Warsaw was razed during the Second World War and has been reconstructed out of grey cement.

It is not necessary to sort out who said what in Poland: the *convergence* of views was the striking thing. The spokespeople for Solidarity, the freelance writers, the priest from the Catholic Church and the government spokesman – all of them had essentially the same view, namely, that Solidarity had moved too fast and blown its chance. They were all pro-Solidarity, anti-Soviet, and waiting for another chance. The difference would be that the people in Solidarity would indulge themselves in blaming the government, and the people in the government would indulge themselves in blaming Solidarity. But it was a dispute over tactics, and over their relative privileges within Poland, rather than about any of the larger strategic goals of extricating themselves from the domination of the Soviet Union.

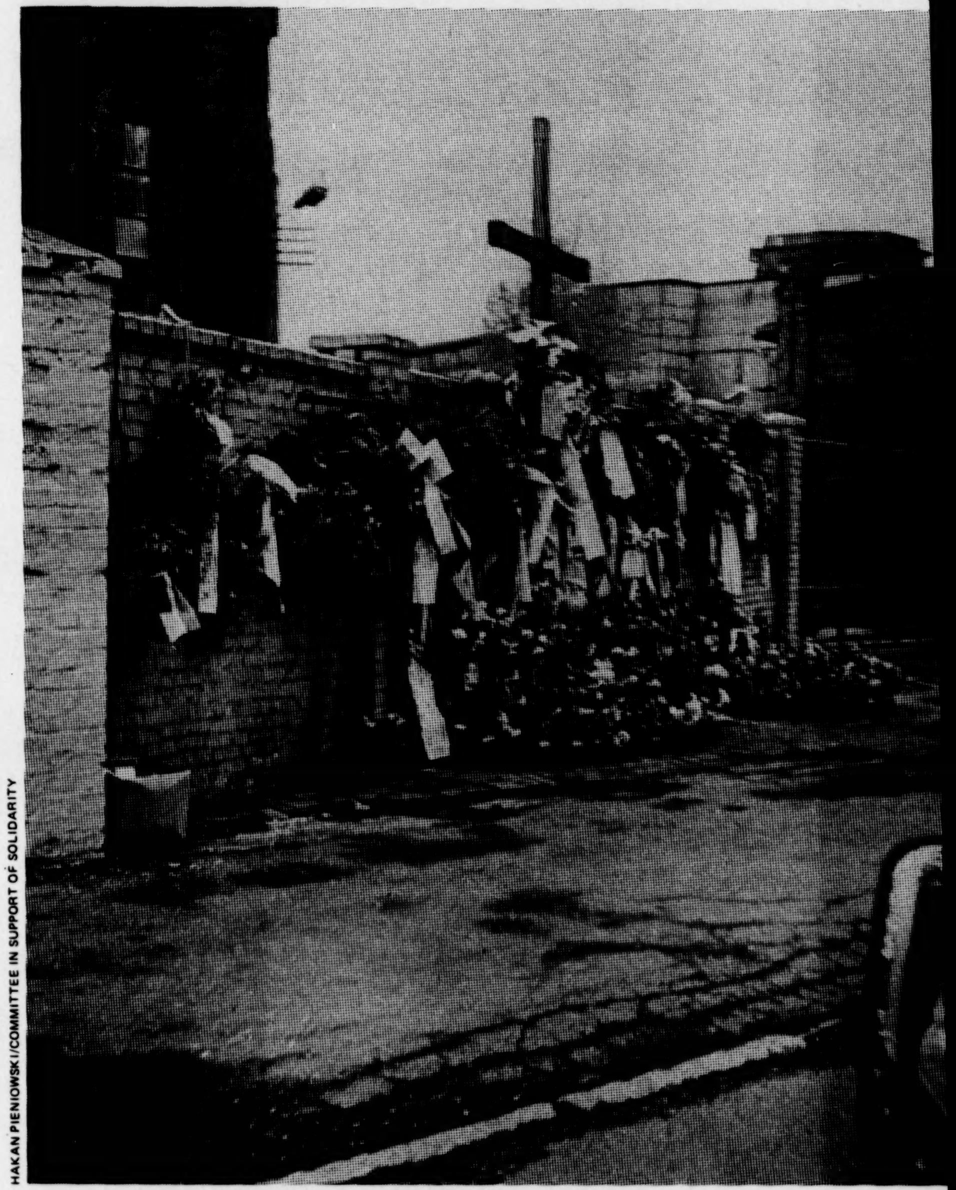
All the Poles had essentially the same view, that Solidarity had moved too fast and blown its chance. They were all pro-Solidarity, anti-Soviet, and waiting for another chance.

The 26th of October we met a film writer and a film director. The contrast between them was interesting: The writer was more militant than the director. Within the framework that I've presented, the writer was for provoking a confrontation with the Soviet Union, regardless. He just couldn't stand the self-abnegation and compromise that the Polish people were having to endure. He wanted to let the chips falls where they may, so to speak, and his passionate hatred for Russians was a sight to behold. The director was more cautious because he knew that it would be suicidal for the Polish people to stand up in a military way to the Soviets.

The next day we went to Cracow on the train. It's about 160 miles south of Warsaw. The contrast with Warsaw was great because Cracow is an unscathed, medieval/renaissance city of overwhelming beauty. Probably Warsaw had been like that before it was destroyed in the Second World War. There we went around and saw the sights the first day and ran along the Vistula River, and it was really there that a new view of the whole East-West problem began to fall into place for me.

Excerpts from a letter written November 2 in Europe:

> The quest for a new vision of the East-West issue took me eastward, all the way to the Vistula in Warsaw and Cracow, and there I discovered that that is where Europe – "the psychic entity" – ends: on the eastern border of Poland. The land gradually changes as you move eastward through Prussia. It looks like Scandinavia. So too do many of the people look Scandinavian. The land slowly begins to look like Russia; geographically, the eastern border of Europe is usually set at the Urals. But Russians, try as they have repeatedly, lack a key European quality, a quality Poles have in spades – namely, a fierce independence; an open, direct honesty; a love of freedom that far exceeds their fear of disorder.
>
> Poles are physically beautiful. Every five minutes you see a woman on the street who makes your head spin. The American stereotype of Poles must be one of our most absurd. In short, I loved Poland and loved the Poles, immediately and spontaneously, and I realized that *Europe needs Poland* (and eastern Europe) *to become whole again*. The NATO/Warsaw Pact division of Europe has, psychically, severed Europe, leaving each half incomplete and wounded. The western countries have possessions and competence; the eastern countries have soul. I began to imagine a recreation of a single Europe. It would be an entity of some two dozen countries with a total population and gross economic product comparable to the United States and to the U.S.S.R. It might well consist of many socialist sub-economies (Spain, France, Greece, Scandinavia, perhaps Italy, as well as the eastern European countries) but would generally know and enjoy western freedoms. The only way the U.S.S.R. would ever acquiesce in such an arrangement would be for NATO to dissolve, U.S. troops to leave Europe, and for Europe to see itself as a relatively neutral unaligned buffer zone between the U.S. and the U.S.S.R., an Atlantic-Occidental buffer. In the Far



There are still many signs of resistance in Poland, like this recent memorial to the Wujek Miners in Silesia, photographed surreptitiously from an automobile. Twelve miners were killed at Wujek on December 16, 1981, when police assaulted a demonstration after the imposition of martial law.

HAKAN PIENIOWSKI/COMMITTEE IN SUPPORT OF SOLIDARITY

East, China would be a similarly unaligned Pacific-Oriental buffer between the U.S. and the U.S.S.R. In other words, the *safety of the world* could be enhanced if both Europe and China aligned with neither superpower, but rather thought of themselves (as they actually do) as more mature civilizations separating the adolescent societies as they come into maturity.

I'm trying to look at geopolitics in a different way here: a way that places the preservation of the world first and looks for a balancing along the East-West axis among the Super Four (namely, the U.S., the U.S.S.R., Europe, and China), rather than the traditional strategy of trying to acquire all the allies one can and thereby become stronger and presumably less vulnerable. In a nuclear world one's own safety lies in neither being too weak *nor* being too strong. It lies in neither being afraid *nor* being feared. In a nuclear world it is in our self-interest to make our adversary feel secure. Paradox of paradoxes! The commandments become self-enforcing once man has God's fire.

Some other observations: Yes, western Europe is decadent, corrupt, obsessed with petty consumerism. And Germany is as austere as ever. What western Europe needs is to forge links – economic and cultural – with the "stepcountries" of eastern Europe: entangle them in countless ways, and become rejuvenated itself in the process, as America did with the Marshall Plan. And material benefits are precisely what the east Europeans most want.

In Poland, we met with a Catholic priest-physicist who had learned his mathematical physics from my book, which is in Polish translation. He is an adviser to the Pope, who was his colleague (in the Cracow monastery) until 1978; he advises the Pope on the rehabilitation of Galileo, and on Polish politics. He was a bundle of energy, the highest energy religious person I ever met. We discussed physics and politics and spirit. Polish Catholics are a breed apart. Their religion really works in their lives.

We talked to dozens of people and they all repeated the same thing: Solidarity's day is done – it's over. It moved too fast, too far, without enough real solidarity of views. It was fissioning before the state of martial law was invoked. The Russians won't tolerate displacement of the Polish Communist Party because this would rapidly shift the whole balance of power in the European theater, which in turn, under present military conditions, would be destabilizing in the world. (If NATO were dissolved, this would be different.) So the Poles had to act swiftly to prevent "intervention by the Warsaw Pact allies," as it is euphemistically put by the government officials. The Poles are sad, tired, depressed, and disappointed in themselves. They all hate the Russians. The Communist Party would receive 2 percent of a popular vote (according to the government official). Yet it must stay in power or the Soviets will rule directly. Surely Poland occupies one of the worst pieces of real estate on Earth: between Prussia and Russia. One key reason that Europe ends at the Polish-Russian border is because that same border separates Roman Catholicism from Eastern Orthodoxy.

So being in Poland brought the realization that old western consumerist Europe was an incomplete entity and could be completed by marrying (or remarrying) itself to eastern Europe. And if that whole European entity could become unaligned in the East-West struggle, that might, over the long run, be a way to stabilize the East-West axis (if simultaneously China were to remain unaligned).

On October 29th we were back in Warsaw and went to Government House and saw the Assistant to Deputy Premier Rakowski. His name was Zdislaw J. Kozlowicz. This fellow had a two-hour discussion with us, during which everything fell into place for us. We finally saw that while Poles are criticizing their government, their government

The safety of the world could be enhanced if both Europe and China aligned with neither superpower, but rather thought of themselves (as they actually do) as more mature civilizations separating the adolescent U.S. and U.S.S.R.

JOANNA HELANDER/COMMITTEE IN SUPPORT OF SOLIDARITY

Polish urban scene: the Marchlewski Factory in Lodz, November 1981

doesn't really disagree with them. Rather, the shots are being called in Moscow and the Poles – government or not – are really all in the same muddle together. We were told later by certain Poles that Kozlowicz was fooling us in his presentation into believing in a greater congruence of views between the government and the Polish people than actually exists. The Polish people resent Communist Party officials for being incompetent bureaucrats, enjoying power and privileges because of their subservience to Soviet authority. But on policy, the differences seem minor, except when compared with the views of the film writer mentioned earlier, who wanted to bring things into an open confrontation and to have the truth come out as it would, even if that involved suicide for the Polish people. So his was the only consistent view that was outside this framework. He just wanted to fight. Partly it's because his uncle had been murdered at Katyn. That incident is a key to understanding Polish-Russian relations. When the Germans invaded Poland in '39 the Russians did likewise from the east and they actually divided Poland up between them. The Russians got hold of ten thousand senior Polish officers, the officers who'd been conducting the war against the Germans on the western front, and shot all of them, and in that way eliminated any possibility of Polish resistance to the Russians both during the Russian occupation and after the war. The whole senior military establishment was eliminated by the Russians. And that incident looms large in the Polish-Russian relationship.

Kozlowicz said on October 29 that releasing Walesa was a matter of little consequence and would occur shortly, and that turned out to be the case. He was released less than two weeks later. He also said that martial law would be terminated soon and it now looks as if that too will follow. He said that in a free election, the Polish Communist Party would be lucky to get two percent of the popular vote, which is a remarkable admission for a Polish Communist official. But he said there's no alternative to rule by the Polish Communist Party, and this was why I believed the man. He said the Soviets will not tolerate a displacement of the Polish Communist Party from the leadership role in this country because to do so would lead to an unraveling of a whole lot of things. It would lead to Polish withdrawal from the Warsaw Pact, which in turn would lead to a change in the balance of forces in Europe, which would in fact make Europe and the world *less* safe. So from his point of view, even though he didn't necessarily like being part of the Warsaw Pact, he felt that for world safety Poland had to remain part of the

Warsaw Pact, and I was forced to see the logic in his argument. It was a familiar revelation, that one. It won't make the world safer to make Russia fearful of all of Europe. It'll make the world less safe. So you could view the membership of eastern Europe countries in the Warsaw Pact as a kind of a duty of a higher order to world safety, even though it's a coerced alliance. Their "willingness" to continue it is perhaps of value to the world right now because it makes Russia feel less vulnerable, which in fact adds to world security. That was the argument, anyway, and I think there's something to it, as long as NATO remains in existence.

An addendum to this trip came the first of November back in Paris when I met with three Polish expatriates. They revealed that the main difference among Poles about the political situation is that some Poles really resent the privileges that the Polish Communist Party officials can get for themselves by belonging to the Party or by being part of the government. Polish Communist Party members are viewed with contempt by many Poles inside and outside of Poland. One of the three is a famous Polish writer. He hasn't lived in Poland for 20 years. He, more than anyone else, stressed that Poland's governmental policies in every detail are set in Moscow. He may exaggerate that but he did give me to understand how thorough the domination has been since 1945 and how there just hasn't been anything like a free Polish spirit or people since then. He was cynical and bitter about the whole thing.

MO TZUING AS SELF-EDUCATION

THE EXPLORATION IN POLAND IS MO Tzuing in the sense that there we are, showing up, expressing deep concern about the whole thing; people are surprised or startled to see that we care enough to come and find out for ourselves. Also we take every opportunity to raise political consciousness about the nuclear issue, or to demonstrate that at least some Americans are not so much concerned with increasing American security as we are concerned with increasing world security. But the main thing that I was doing there was educating myself about the East-West issue and coming to the beginnings of a new understanding of the balance of forces along the East-West axis that might, in a generation's time, lead to a safer world – a safer northern hemisphere, at least, in these nuclear times. So that, I think, will be the main outcome or value of the European part of the trip, and that's part of the purpose of Mo Tzuing – educating ourselves to create a vision of a world order which is less prone to conflict and war. Then we must communicate it.

Kenya also has been largely an educational experience – getting it into one's gut what it really means to people to be this poor and to be this angry about their relative position within Kenya and in the world. The main conclusion from the experience in the southern hemisphere has been that the North-South issue, as it's usually presented, is not at the moment the main barrier to progress in southern countries. It certainly needs to be attended to and dealt with: we need to make sure that our policies and practices don't make it even harder for the southern countries to develop, which they now do. But the main conclusion I've come to is that before very much progress can occur on the North-South issue between the two hemispheres, there has to be a lot of progress in individual societies and nations within the south. The North-South issue *within* each society or country has to be dealt with; the rampant inequality and the privileged status of the elites have to be dealt with; and only then can those countries collectively deal with their relative poverty compared to the more affluent northern hemisphere. ■

PEACE CORPS 2

PEACE CORPS 2 IS PRIMARILY A PROPOSAL PERTAINING TO THE EAST-WEST ISSUE. I've had fruitful discussions here with the Peace Corps director in Kenya about Peace Corps 2. He is a black American who's been in African countries for over ten years directing various Peace Corps groups. He had lots of good ideas and contacts through whom to develop the plan for Peace Corps 2. Peace Corps 1 dealt mainly with the North-South question, sending American technicians and teachers into developing countries. Peace Corps 2 will deal not with the issue of *sufficiency* but with the issue of *security*, and is directed along the East-West axis. In its grandest manifestation, it envisages exchanging hundreds of thousands of Americans, Europeans, Russians, Chinese, and others, multilaterally, across all these boundaries: it would be an international organization. In practice, however, it may well have to be an American organization and consist of bilateral exchanges of Americans with Russians and Chinese.

–Robert Fuller

REAL INTELLIGENCE

Warsaw
EAST GERMANY
POLAND
CZECHOSLOVAKIA
SOVIET UNION
AUSTRIA
HUNGARY
ITALY
YUGOSLAVIA
ROMANIA
BULGARIA
GREECE
POLAND
ETHIOPIA
KENYA

The World According to Andropov

by Szanto
Illustrations by Matthew Wuerker

TWO NEW MAJOR PLAYERS emerged on the world political scene in 1982: the nuclear freeze movement and Yuri Andropov, Leonid Brezhnev's successor. For those like me who sympathise with the aims and methods of the former, it is important to understand the aims and methods of the latter. A significant – though not sole – motive of the nuclear freeze movement is a judgment about the morality of preparations for a manmade Armageddon. Of course, there are also those who argue that enough's enough – we are strong enough for war prevention. But all agree on the proposition that avoiding nuclear war cannot be served by another lap in the circular course of the arms race.

While a moral sensibility undoubtedly informs the nuclear freeze movement, its aims must be achieved in the political arena, and so a political perspective must inform it as well. Politics has many similarities to game playing. The problem in politics, however, is that most of the players want to win different prizes and play by different rules. Successful politics therefore requires redefining the game: seeing your own game as it will be affected by the play of the other intersecting games. Imagine trying to get a soccer ball downfield while at least two other teams are playing football and lacrosse. For the nuclear freeze movement to be more than merely a further exercise of self-expression of moral outrage, it must see the game of games within which it is playing. The most dificult trick, of course, is getting enough distance so one can see the game of games. Some observers seem more adept in this respect that others. The following summarises some recent observations by a European observer with a history of neutrality of perspective, i.e., uncoloured by ideological or moral judgements – though the method and culture do prevent any true claim to objectivity. However, he, unlike the pure game players like Henry Kissinger, gives a great deal of importance to such popular movements as Solidarity, Islamic fundamentalism, and the nuclear freeze.

The last major new player before Andropov was, of course, the cardboard cowboy, master of rhetorical heroics, our own Ronald Reagan. He consciously stood against the desirability of detente with the U.S.S.R. His aims were threefold: 1) rollback the nuclear parity the U.S.S.R. is close to achieving; i.e., the U.S. should be the dominant nuclear power; 2) cut financial support for socialist economies; i.e., cut out the key prop supporting their already stagnant economic system; 3) counterattack in the Third World; i.e., demonstrate

The anonymous author works in strategic planning for a very large very multinational corporation. It is part of his function to be in the thick of consequential international intelligence, hence the name of the feature, with "intelligence" meaning both: 1) coherent, accurate, and sufficiently complex world view, and 2) leading to intelligent behavior by the reader. Since no credibility is lent by the author's anonymity, his views must stand on their own merits. We hope his feature will appear regularly in CQ.
–Stewart Brand

the U.S. will and ability to prevail in such places as Central America and Southern Africa.

But an end to detente, like detente itself, means different things to each player. For each of the major actors detente had a distinctly different meaning. Detente for the U.S. was a process for regulating competition in order to avoid a drift toward war. A key aim therefore was strategic arms control. A secondary aim was the establishment of a "condominium" in the Third World. For the Europeans detente was about reducing the barriers between East and West Europe and reducing the likelihood of armed conflict in Europe. The Soviet Union had a third vision of detente. For them detente did not mean preserving some status quo with the U.S.; it was instead a phase in the continuing struggle between – in their words – the forces of imperialism and the forces of socialism. Their view was that detente was forced on the West by the approximate military parity, which then permitted competition in other arenas.

The arrival of Mr. Andropov at the top of the Soviet pyramid will not mean a basic change in strategy – which always is a function of that byzantine pyramid, not just of its man at the top. The Soviet strategy had already begun to change in response to Mr. Reagan. That strategy has four elements:

- consolidation of existing gains
- a "peace offensive"
- a lower profile in the Third World
- a return to detente on their terms

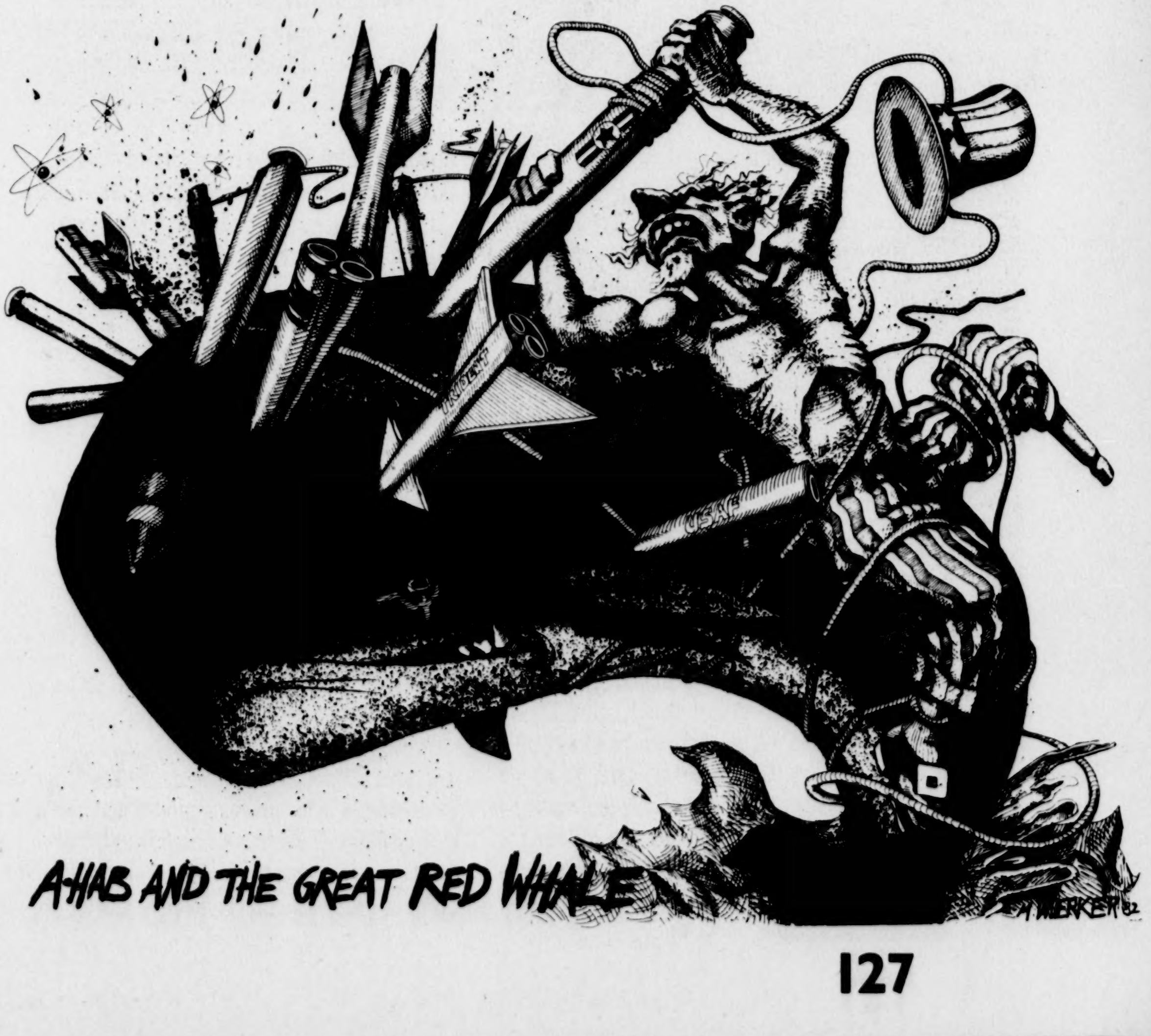
This strategy relies on several emerging features in the Western alliance:

- the excesses of the Reagan administration
- the economic difficulties of the industrialized nations
- the growing divisions among Europe, the U.S., and Japan created by hard times
- the growing anti-nuclear-weapons movement

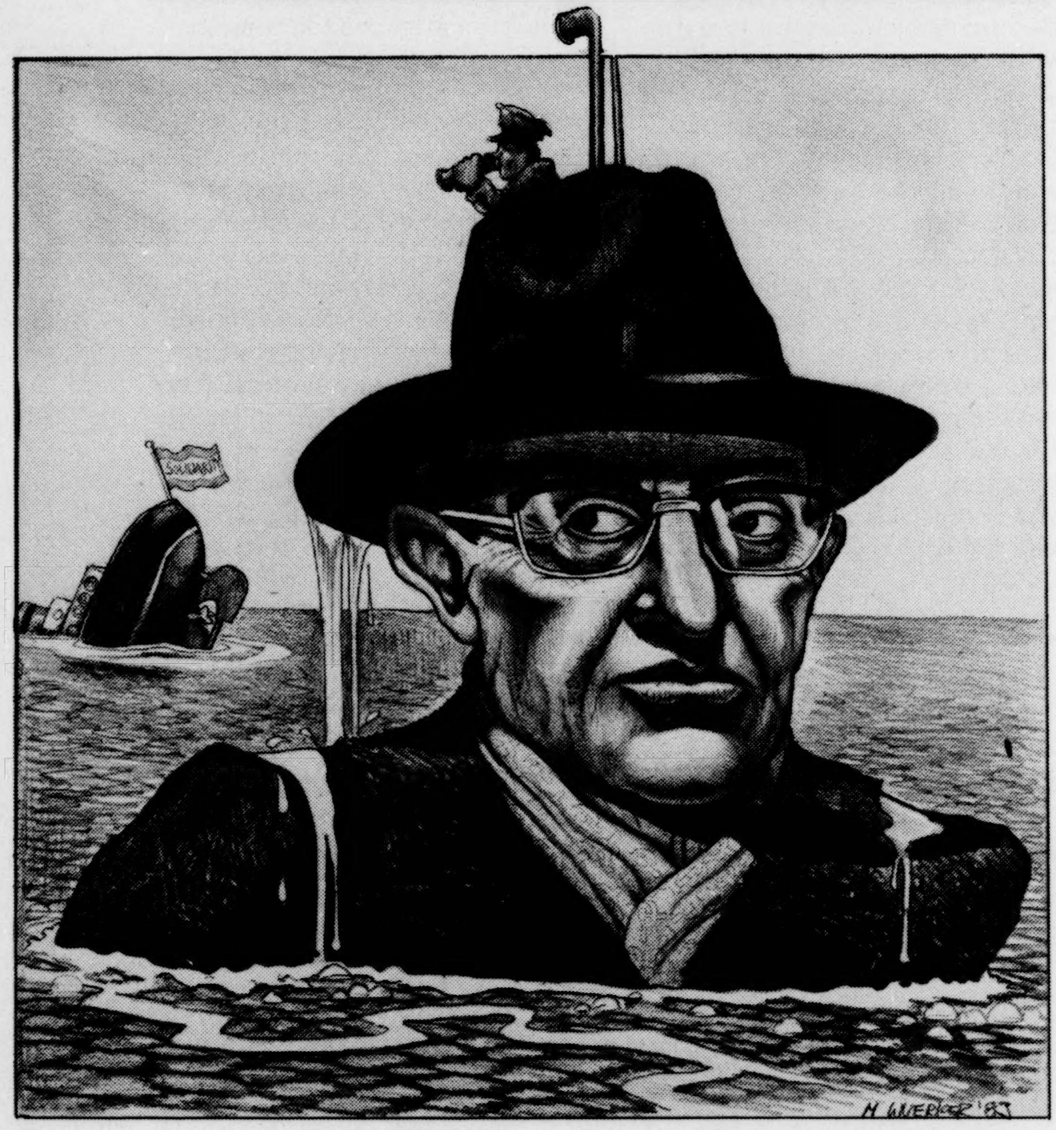
The principal difference that Mr. Andropov is likely to bring is a new approach to tactical decisions. He is as much an ideologue as his predecessors – a true Leninist and no "liberal." However, he is very much a realist. Of Marx's many predictions the only one Andropov believes has been fulfilled is the shift in the balance of power away from U.S. dominance and toward equality with the Soviet Union and beyond. In their terms, such a shift is "the correlation of forces" (Marxist jargon which means "the sum of all the ways the two nations interact"). Having won this advantage he will not fritter it away. Indeed, his greatest challenge is in the exploitation of this shift to compensate for the stagnation of the Soviet system without further weakening the system. His realism extends to a careful weighing of the potential costs and benefits of any action, unblinded by his ideological aims. Compared to the nostalgic simplicities that shape Reagan's world view, Andropov is a sophisticated and formidable player of geopolitical games.

No better example exists than the contrast of tactics in Poland and Afghanistan. Andropov opposed the Afghanistan invasion because he believed an ineffective stalemate was the inevitable outcome. On the other hand, he is the architect of the suppression of Solidarity by less direct and clearly more effective means. Andropov is no capitalist, but the lessons of Hungarian economic success are obvious. He will employ market mechanisms in the U.S.S.R. where economic efficiency can gain by them and he will simply couch the moves in Marxist rhetoric. He will be more subtle and less overtly repressive in his suppression of domestic dissent. He will use

The Europeans view the U.S./U.S.S.R. conflict as the competitive decadence of two empires, with the only uncertainty being which will decline faster.


AHAB AND THE GREAT RED WHALE
USAF
MERKER '82

Compared to the nostalgic simplicities that shape Reagan's world view, Andropov is a sophisticated and formidable player of geopolitical games.



every opportunity to gain Western economic assistance. Indeed, he clearly wants to play on the economic crisis of the West, creating new markets for Europe, drawing them closer to their continental brothers of the East. This is made more possible by the continental crisis in North America as Mexico and Canada collapse around the U.S.

Another critical element of the emerging strategy is a rapprochement with China, where he will attempt to exploit Reagan's mistakes on China. The Kissinger era led to the U.S. having better relations with both the U.S.S.R. and China than either had with the other. Now both the Russians and the Chinese want to change that. This movement toward each other will not be a fundamental reversal of the shared perception of the basic divergence of their interests.

This improvement in Soviet-Chinese relations will trigger yet another change in relationships. It will permit Japan to open new doors to the U.S.S.R. without jeopardising its relations with China. A Soviet move toward Japan may be the key element of this strategy. A mutual trade in technology and resources could be vital to both partners. It can be argued that the long-term interests of Japan conflict with those of the U.S. and Europe. Siberia – a virtual treasure trove – is at the Japanese doorstep and yet the Japanese are mostly barred from entering. It is certainly true that the bitter political history and deep cultural/economic differences between Japan and the U.S.S.R. are a huge hurdle. But the Japanese are both realistic and flexible. At the end of World War II, few people would have anticipated the present circumstances of Japan. Andropov will likely use the same tactics with the Japanese as with the Europeans – military intimidation and economic seduction.

As for the Third World, Andropov sees mostly chaos with little room for meaningful long-term gains. The socialist revolutions are useful as a nuisance to the West, but there is little chance of a real, stable socialist order. He does fear Islamic fundamentalism in the Middle East (not in his own domestic provinces). He will therefore be cautious in the Persian Gulf. The Soviet record in the Middle East is not too good. For example, they've gotten themselves into the lose/lose situation of backing at various times both sides in the Iran-Iraq conflict.

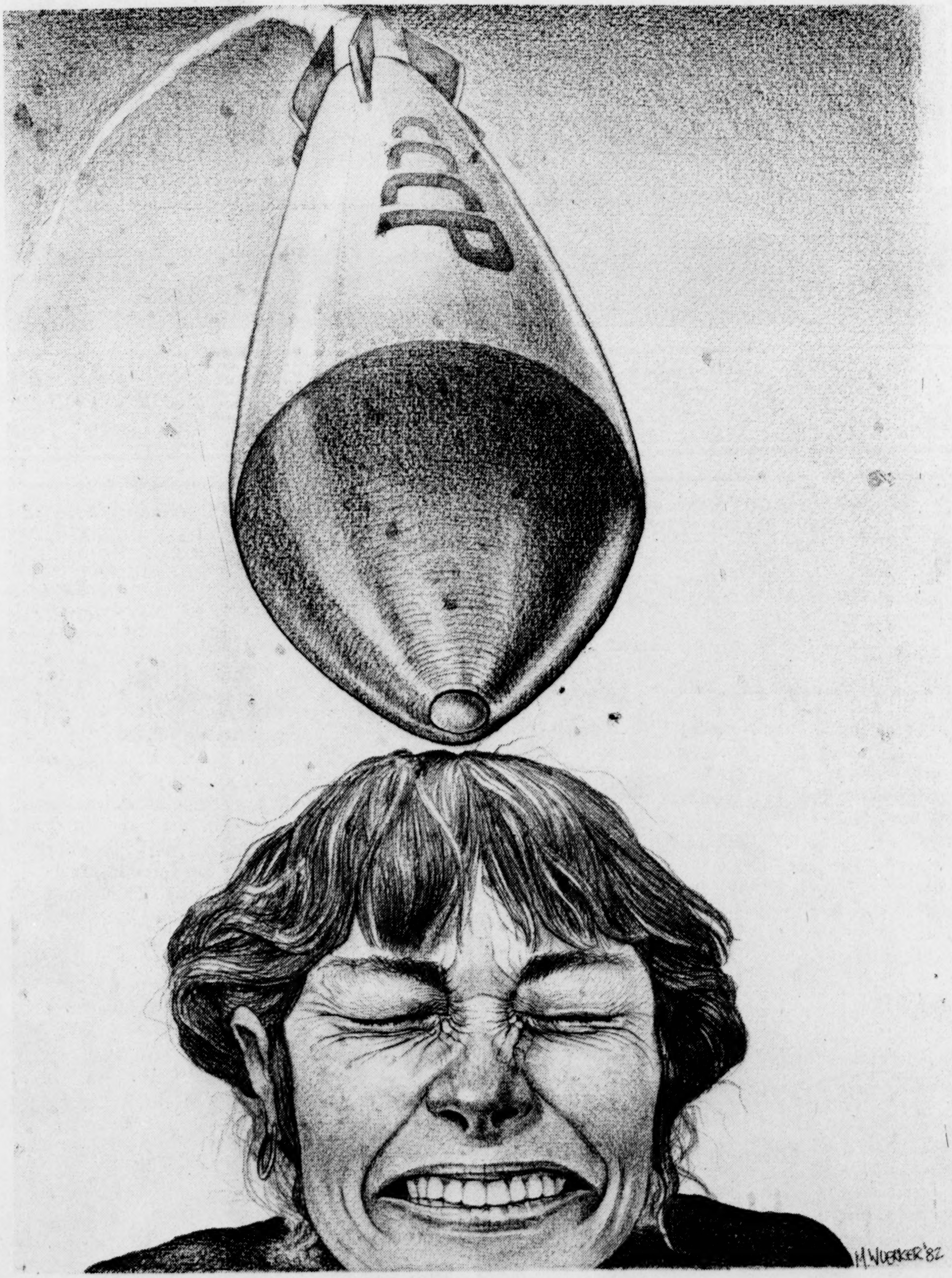
In Europe one of the central aims is the further neutralisation of Germany. The Soviets will play on growing German nationalism and desire for reunification. They have successfully created a strategic situation where the U.S. installation of cruise and Pershing II missiles becomes a further divisive force. Finally, they will play on the economic crisis.

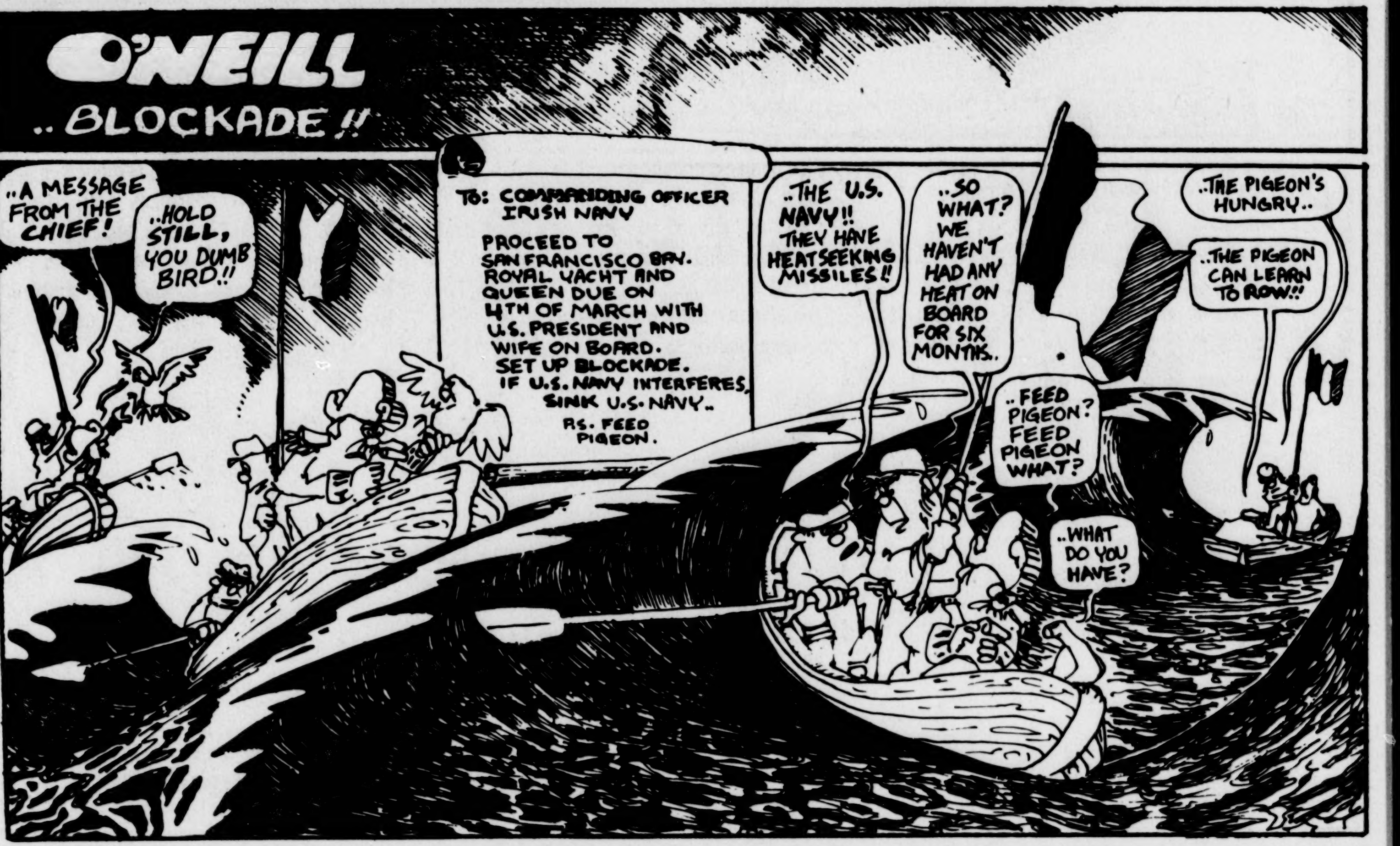
The U.S. view is nowhere shared in Europe. Europeans do not share the view of Jimmy Carter's advisors that the U.S.S.R. is a paralysed, paranoid, ideologically dead giant. Nor do they share the Reagan view that detente was only a ploy in some Soviet master plan. They do not believe that U.S. policy can force internal changes in Russia. They don't believe, as Richard Pipes does, that the U.S.S.R. is so riddled with economic flaws that the added push of a new arms build-up will lead to the collapse of the Soviet economic system, achieving a final victory of West over East. Thus the Europeans, who have no desire to move toward Russia, are actively being pushed in that direction by the perversity of Reagan's military, economic, and foreign policy, while the Russians are giving them more carrot than stick (e.g., the gas pipeline).

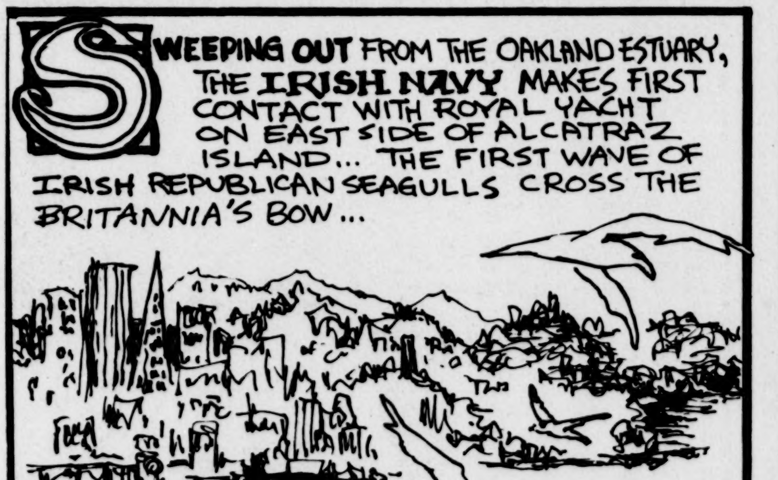
The Europeans view the U.S./U.S.S.R. conflict as the competitive decadence of two empires, with the only real uncertainty being which will decline faster.

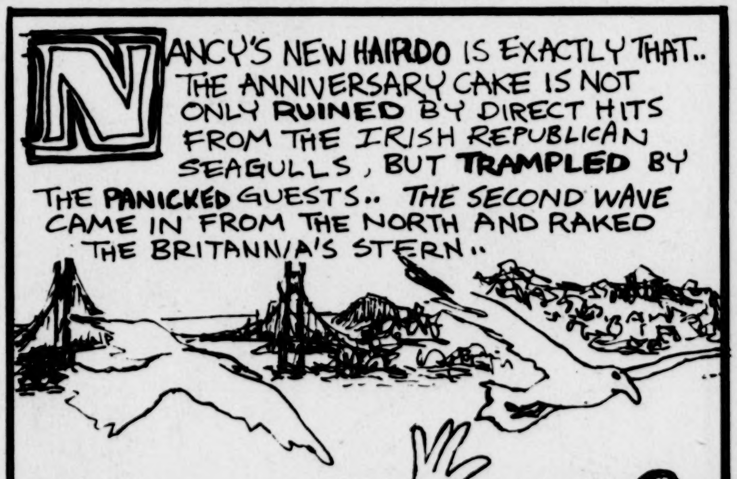
Is my friend right? I'm not sure, but his certainly isn't a view you'll find in the U.S. media of any persuasion. It is one view of the current state of play and rules of the game of games.

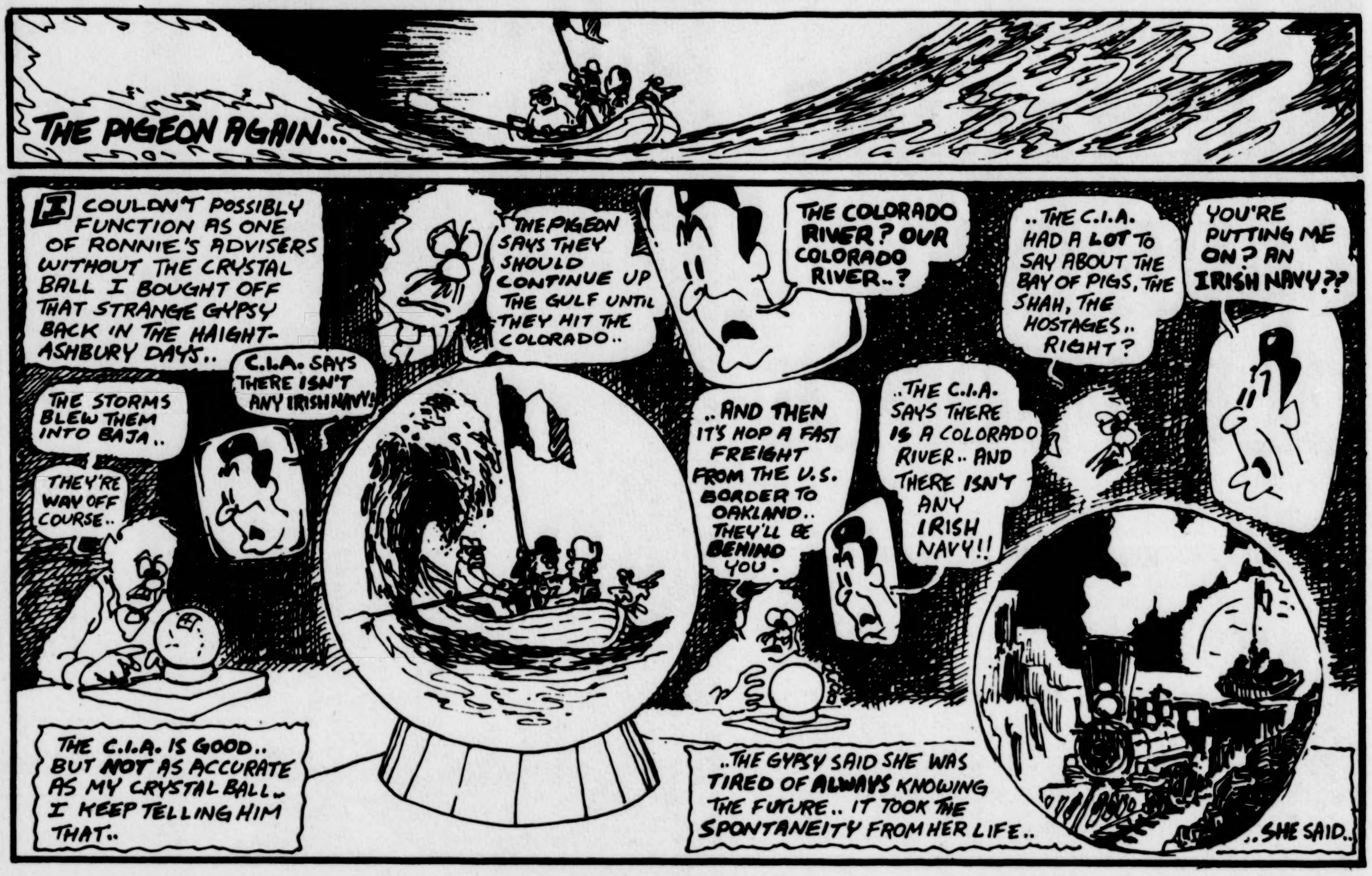
The peace movement is then seen as a pawn in the game. Reagan, given his history, cannot imagine that the movement is indeed just what it seems, the spontaneous upswelling of a general concern about avoiding holocaust. The Soviets see the movement as a geopolitical opportunity. The strategic challenge for the nuclear freeze movement is to outplay the chess players in Moscow, avoid a shoot-out with the cowboy in the White House, and still achieve the aim of reducing the dangers of nuclear war. ■



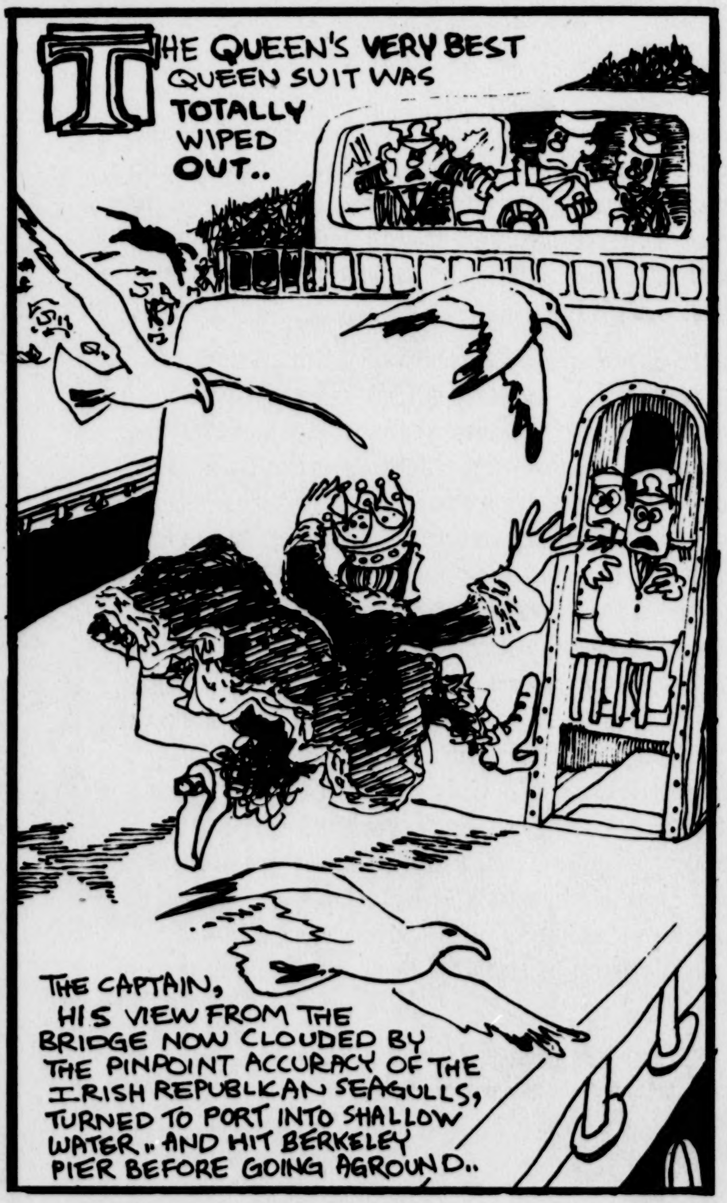

O'NEILL
.. BLOCKADE !!
..A MESSAGE FROM THE CHIEF!
..HOLD STILL, YOU DUMB BIRD!!
TO: COMMANDING OFFICER IRISH NAVY
PROCEED TO SAN FRANCISCO BAY. ROYAL YACHT AND QUEEN DUE ON 4TH OF MARCH WITH U.S. PRESIDENT AND WIFE ON BOARD. SET UP BLOCKADE. IF U.S. NAVY INTERFERES, SINK U.S. NAVY..
P.S. FEED PIGEON.
..THE U.S. NAVY!! THEY HAVE HEATSEEKING MISSILES!!
..SO WHAT? WE HAVEN'T HAD ANY HEAT ON BOARD FOR SIX MONTHS.
..FEED PIGEON? FEED PIGEON WHAT?
..WHAT DO YOU HAVE?
..THE PIGEON'S HUNGRY..
..THE PIGEON CAN LEARN TO ROW!!

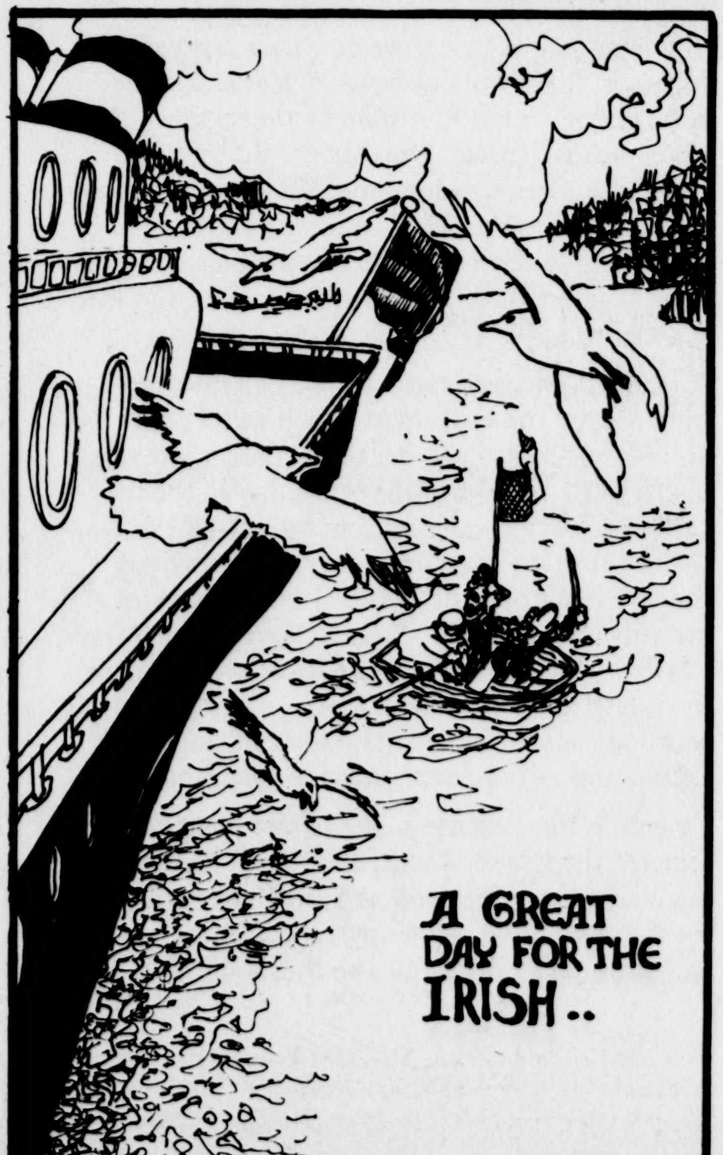

SWEEPING OUT FROM THE OAKLAND ESTUARY, THE IRISH NAVY MAKES FIRST CONTACT WITH ROYAL YACHT ON EAST SIDE OF ALCATRAZ ISLAND... THE FIRST WAVE OF IRISH REPUBLICAN SEAGULLS CROSS THE BRITANNIA'S BOW...


NANCY'S NEW HAIRDO IS EXACTLY THAT.. THE ANNIVERSARY CAKE IS NOT ONLY RUINED BY DIRECT HITS FROM THE IRISH REPUBLICAN SEAGULLS, BUT TRAMPLED BY THE PANICKED GUESTS.. THE SECOND WAVE CAME IN FROM THE NORTH AND RAKED THE BRITANNIA'S STERN..

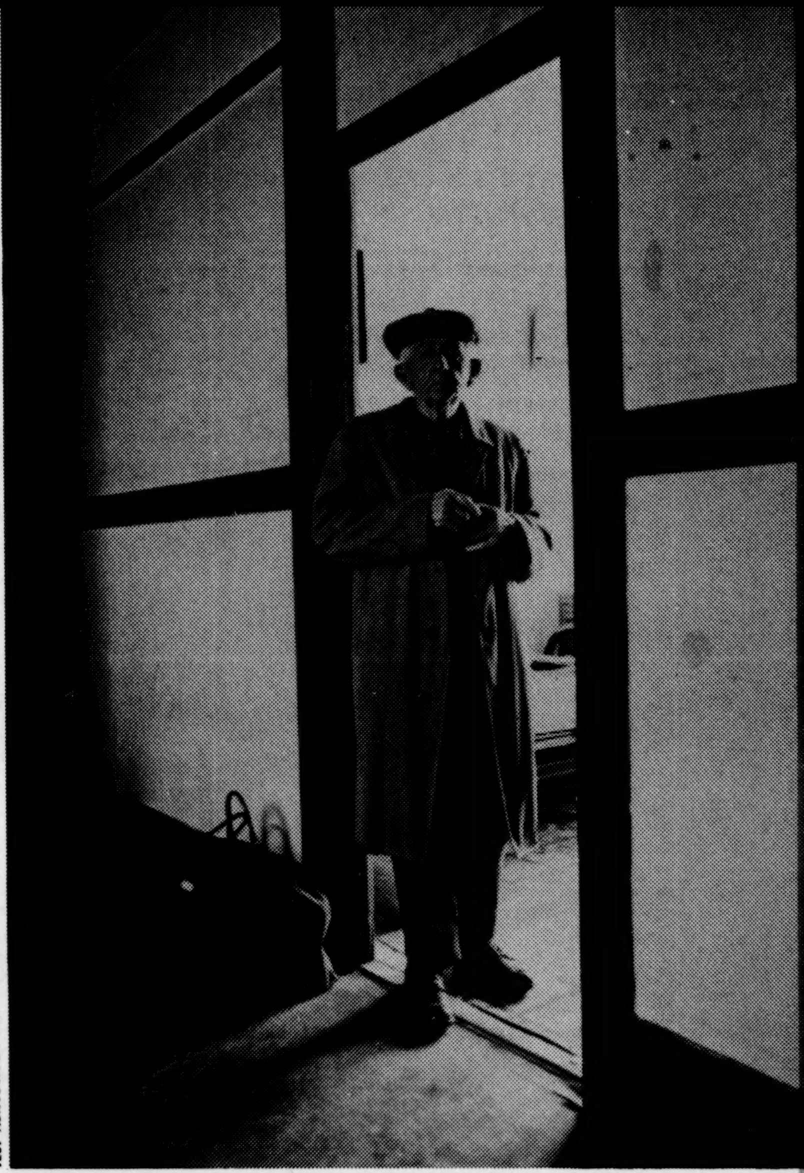

THE PIGEON AGAIN...
I COULDN'T POSSIBLY FUNCTION AS ONE OF RONNIE'S ADVISERS WITHOUT THE CRYSTAL BALL I BOUGHT OFF THAT STRANGE GYPSY BACK IN THE HAIGHT-ASHBURY DAYS..
THE PIGEON SAYS THEY SHOULD CONTINUE UP THE GULF UNTIL THEY HIT THE COLORADO..
THE COLORADO RIVER? OUR COLORADO RIVER..?
..THE C.I.A. HAD A LOT TO SAY ABOUT THE BAY OF PIGS, THE SHAH, THE HOSTAGES.. RIGHT?
YOU'RE PUTTING ME ON? AN IRISH NAVY??
C.I.A. SAYS THERE ISN'T ANY IRISH NAVY!
THE STORMS BLEW THEM INTO BAJA..
THEY'RE WAY OFF COURSE..
..AND THEN IT'S HOP A FAST FREIGHT FROM THE U.S. BORDER TO OAKLAND.. THEY'LL BE BEHIND YOU.
..THE C.I.A. SAYS THERE IS A COLORADO RIVER.. AND THERE ISN'T ANY IRISH NAVY!!
THE C.I.A. IS GOOD.. BUT NOT AS ACCURATE AS MY CRYSTAL BALL.. I KEEP TELLING HIM THAT..
..THE GYPSY SAID SHE WAS TIRED OF ALWAYS KNOWING THE FUTURE.. IT TOOK THE SPONTANEITY FROM HER LIFE..
..SHE SAID..

* * *


THE QUEEN'S VERY BEST QUEEN SUIT WAS TOTALLY WIPED OUT..
THE CAPTAIN, HIS VIEW FROM THE BRIDGE NOW CLOUDED BY THE PINPOINT ACCURACY OF THE IRISH REPUBLICAN SEAGULLS, TURNED TO PORT INTO SHALLOW WATER.. AND HIT BERKELEY PIER BEFORE GOING AGROUND..


A GREAT DAY FOR THE IRISH..

NOT TAKING CARE OF OLD PEOPLE



IRA NOWINSKI, NO VACANCY, 1971

Four short essays by Paul Hawken

WHEN ARE PEOPLE OF NO USE? Older people are the subject of a curious debate in America. As beneficiaries of social security, they represent the U.S. government's largest liability. Government payments have far outstripped tax contributions, and, given the $200 billion projected deficit, there is much discussion on cutting those benefits, taxing them, delaying them, or in some way reducing total outlays for the retired. Since the deficits threaten to forestall economic recovery by raising interest rates and crowding out other capital investments, there is naturally talk about cutting payments. The argument is that if we don't get our fiscal act together, there will not be sufficient economic strength generated to sustain future support. In other words, perhaps benefits should be cut in order to bolster the economy. Since social security is such a touchy political issue, the language of the debate is never so explicit. But that is the real issue – do we or do we not want to pay, and who is going to pay?

A recent **Newsweek** cover showed an inverted pyramid, on the bottom of which was a youth holding successively larger tiers of older workers on his back. When my wife, Anna, saw it, she shook her head. As a former ministerial assistant in New Guinea for two years, she traveled throughout the country, from the newer cities to the most primitive tribespeople. "Never, even in the poorest of tribes," she noted, "would there ever come up the question of how to take care of old people. It was done as simply and naturally as talking. Not taking care of old people was inconceivable."

I mention this because somehow we have intermingled the issues of care, in this case the care of the elderly, and the economy, and have tried to square them up in some way, as one would try to balance books. But of course they will never balance. Retired people are supposedly of no use because they do not work but require instead the work of others to support them. Yet it is precisely in this understanding of taking care of what seemingly has no use that we also understand that which does have use.

I recently addressed a group of young Swedish businesspeople, most of whom were involved with the cooperative movement there. I was describing the informal economy, the underground culture that is estimated to account for $300 to $700 billion in additional gross national product in the U.S. When I mentioned that part of the reason for the growth of the underground economy was people avoiding taxation, they looked puzzled and pained. Why, one of them asked, would anyone not want to pay taxes when everyone received benefits from society, directly and indirectly? Like the New Guinea tribespeople, they could not conceive of not wanting to help a system whose purpose is to support people. Their sense of involvement and connectedness can be attributed in part to their small, homogeneous population. America has no such crutch. Instead it must rely on deeper

Paul Hawken's new book, **The Next Economy,** *is reviewed on p. 135. It's a particular pleasure, while half a dozen other magazines are "pre-publishing" portions of the book this month, for* **CQ** *to be printing even newer material. Also other magazines are asking him to do an economics column for them for better money. He says he likes the readership here.*
–Stewart Brand

instincts if it is to develop equivalent social awareness.

Even more critical to this issue are the homeless, particularly the bag ladies and men who sleep on boiler vents for warmth and rifle trash bins for food. Last year in Manhattan I walked with someone who stopped for every such person, talked to them, said some encouraging words, and always gave them some money. He never said no when asked, even if the person was abrasively coarse and confrontive. When I emulated his behavior later that year in the presence of a well-off businessman, he jokingly said I should be careful or I would turn New York into Calcutta. This is a man who makes a substantial amount of money setting up tax shelters. The irony of his statement reflects the deeper irony of our economy: The richest country the world will ever see says it may not be able to afford modest sums to those who helped make it thus.

Karl Marx foresaw the conflict inherent in industrialized society between economic growth and social care:

> On the one hand, there have started into life industrial and scientific forces which no epoch of human history had ever suspected. On the other hand, there exist symptoms of decay far surpassing the horrors of the latter times of the Roman Empire. In our days everything seems pregnant with its contrary. Machinery, gifted with the wonderful power of shortening and fructifying human labor, we behold starving and overworking it. The newfangled sources of wealth, by some weird spell, are turned into sources of want. The victories of art seem bought by the loss of character. At the same pace that mankind masters nature, man seems to become enslaved to other men or to his own infamy... All our inventions and progress seem to result in endowing material forces with intellectual life, and stultifying human life into a material force.

Unless an economic system takes care of that which is of no use, it will not recognize that which is. The debate over social security is the same debate heard about air, coastlines, the wilderness, and endangered species. The conventional wisdom says there will be trade-offs for growth, but that is simply not true. Economic prosperity depends on taking care of the seemingly inconsequential, because care conserves and extends life. Prosperity requires the most intelligent use of resources, human, natural, or otherwise. Just as it is less expensive to care for an object by maintaining and servicing it rather than abusing it and throwing it away, it is more economical for a society to take care of itself rather than abandoning unproductive segments. Rich as we may be, our economy will continue to cause anxiety, worry, and doubt until we understand this. □

OIL UPDATE

OIL UPDATE: The fall in the price of oil first discussed in CQ nearly a year ago (Summer '82) has begun. Since all media now are reporting it, largely as a possible mixed blessing, I would like to address the unquantifiable aspects of this change. As previously discussed, if the price of oil falls slowly and gradually, there will most probably be a period of renewed economic growth worldwide, especially in the Advanced Capitalist Nations (ACNs). After all, they are the most energy dependent and consumptive nations, and will benefit most in the short run. But if it should drop quickly, no one knows what will happen. Not only are there questions of international liquidity and solvency brought about by the loss of oil income in many of the oil-exporting nations, there is also the question of mood.

My sense is that the world is in a deflationary mood. Unlike the seventies, when spending money on hard assets was rewarded by those assets appreciating more rapidly than money was inflating, thus causing a self-reinforcing and decidedly unproductive type of economic behavior, the world has shifted into the opposite mood. Now, holding cash and forgoing purchases is rewarded, for as time passes, the price of what you might want has gone down. This is true in real estate, automobiles, and many other items. And now it is true with oil. All over the world, companies are withholding purchases and waiting. This is putting additional pressure on producer countries to lower prices. But as prices start to fall, this will reinforce the wait-and-see attitude of the major oil buyers, further strengthening deflationary psychology.

The lowering of the price of oil is a big problem, and the world does not know as yet whether it can be dealt with by the financial system. But the problem of a deflationary psychology is a larger concern, one that can envelop the world economy until it has thoroughly contracted. Since such a contraction only occurs every 50 to 60 years, the experience is generally just out of reach of most people's adult memory. It seems like something in the past – the Depression, the Panics of the 1870s, and so on. Most economic analysts are saying that in fact we have just been through this period of contraction, starting in 1967 and ending now. Maybe so. But my hunch is that there is too much debt and unattended economic excess in the world for us to have fully paid our pipers. It is and can only be a hunch. In any case, oil is no longer a cartelized resource – it has become a commodity again, subject to the laws of supply and demand. This does not mean, however, that as a commodity it won't continue to have considerable impact on the world's economies for decades to come. □

[more →]

BOTTOMING ALONG: There have been two recessions since 1979, or one with two bottoms. It all depends on how you look at it. The most likely event this year or next is a third bottom to what is really a long period of economic reevaluation and contraction, because world economies are still in the midst of adjusting to the enormous increases in energy prices of the 70s, the oil glut notwithstanding. By contraction, I refer to a system that is living off of principle rather than interest, a system that is dipping into reserves rather than creating sufficient new wealth. The problem with the GNP as a measure of economic growth is that it measures primarily what we spend. If we spend more by increased borrowing and debt, the GNP takes no notice but chalks up gains. If we grow by borrowing both from our capital reserves (debt) and environmental reserves (natural resources) we will always be creating a real negative balance against which such apparent growth must be measured.

In the case of capital, this negative balance is the enormous build-up of debt seen in the U.S. and internationally. It is not Federal debt that has grown so worrisomely large over the past decades, but virtually all other forms of debt. Between 1950 and 1980, Federal debt rose about 300 percent, while consumer debt rose by 1300 percent, mortgages by 1500 percent, corporate debt by 1200 percent and state and local government debt 1300 percent. The Eurocurrency market – an unregulated and floating pool of dollars, marks, yen, and pounds – has ballooned from a negligible amount in 1970 to over $2 trillion today. International debt, particularly to lesser-developed countries, has grown unmanageable, as is widely reported. This build-up of debt has continued throughout the past recession, and will grow even faster if there is a period of recovery. Whereas debt and fiscal stimulation acted as a tonic in the late thirties and through succeeding decades, feeding the growth of the industrial nations, its sheer volume now causes it to act as a depressant, slowing down the ability of nations to expand and reinvigorate their economies.

On the other side of the ledger are resources, and in particular oil. Oil will drop in price. Whether slowly or gradually depends on politics and temperaments. But a drop now is a reflection of the rapid rise due to the Iranian revolution, one that even some OPEC members knew was too high and risky. But in the long term, energy is in a rising trend, and even with a drop in oil prices to one half their current level, oil would still be more expensive in constant dollars than it was eighty years ago. My guess is that oil will fall to approximately $21 per barrel, with a possible dip below that until it finds the level the market will support. We have borrowed from resources by the rapid consumption of energy, particularly since World War II. World consumption of oil quintupled in just thirty years, a rate of expansion that will never be equalled. Since that time, world consumption has risen slightly and then dropped, reflecting the inability of industrialized countries to "borrow" more resources without exorbitant price rises.

This recession is not a typical one, nor, do I think, will it result in a depression. This is a recession in which the world is trying to rearrange how it grows, its definition of standard of living, and how to produce more goods given that energy supplies will be roughly constant for the next hundred years. The Reagan administration hoped that recovery could be purchased by lowering inflation at the expense of 12 million unemployed. But recovery will only occur after there has been an extensive transition made by every person, company and institution in the United States. This process of adaption has been occuring for a decade and will continue to occur. It is the reduction of mass – material, energy, movement, and resources – through an elegant redesign of our systems: how we buy, how we produce objects (cars for example), how we take care of possessions, communicate, and work. To say we are going to a service economy is fatuous. What do servers eat and wear? Serving what? We are going to a far more materialistic economy, an economy of radical scrutiny of time, energy, and material.

Thus we are not in a recession we can spend ourselves out of. In order to emerge from this recession, we have to redesign. Because all goods in the economy are becoming more limited in availability by virtue of rising prices and falling wages (wages have dropped 16 percent since 1973), the new economy approximates a game, a rather wonderful game I might add, in which success is measured by less. This is why the stand-out in U.S. business is the computer industry, a technology that is rooted in miniaturization, reduction, and elegance of design. In every industry the companies that are thriving are doing the same thing. They are re-engineering their products to be smaller, more effective, and easier to service, to last longer and do more. In each case they are products that will do more for the user while requiring less materials in their manufacture. This transitional process is not understood in Washington, nor anywhere else it seems. Thus no policy addresses it while many hurt it. The likelihood, then, is an economy that lurches instead of grows, stops erratically from time to time, and then proceeds with its adaptive efforts despite the best and worst intentions of economists and politicians. ▫

INFORMATION BARRIERS

INFORMATION BARRIERS: One of the key components of future economic success will be software, whether personal programs or industrially applied programs used to monitor robotization. And given that the world is in a period of contraction, you can not only look for protective trade barriers, but also attempts to limit the international transfer of coded information — software, satellite transmission, financial services. The European Economic Community already levies duties on computer programs — when it can — and is looking at other measures that will generally put it at a disadvantage. Look for taxes on video transmission, cable systems by localities, and other attempts to cash in on the shift away from goods to intelligence. And they will work about as well as drug laws work. ■

The Next Economy

Economic civilization is going around a corner the like of which it's never seen before. This is the only guidebook so far. Customers and citizens and adaptive businesses are leading the way. Governments and major corporations are following. Where we come out is better.

Hawken economics is rooted in the individual. It responds to changes in individual values and activity. It speaks clearly to individual understanding and gives good counsel for individual behavior — "how to invest your life" — which in turn benefits the commonweal as well as the individual.

*Because Hawken is a businessman — the only economist who is — his writing has a street savvy you find nowhere else (except Peter Drucker). His business, Smith & Hawken Tools (***NWEC** *p. 129), is a success story of the Eighties. He is not notably wealthy. He is notably whole and happy. There, perhaps, is the fundamental optimism of his book, amid its necessary dire warnings. The now waning Mass Economy amassed fabulous wealth. The emerging Informative Economy may not be so opulent, but it presents greater opportunity for wholeness and happiness.*

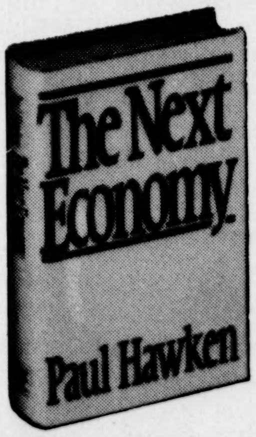
Paul Hawken is the most popular contributor to **CoEvolution** *in its 10-year history. His economic predictions are routinely dead on. No other economic thesis around these days has that predictive quality.*

Though based on his three years of writing for **CQ**, *the book is entirely new material. Since the* **CQ** *readers, offices, and staff have been in the thick of the book's genesis, we are offering it by mail order direct from* **CoEvolution**. *Available late April. It won't be in the bookstores till late May.*

—Stewart Brand

The Next Economy
Paul Hawken
1983; 191 pp.
$12.95 postpaid from:
Holt, Rinehart and Winston
383 Madison Avenue
New York, NY 10017
or

CoEvolution Mail Order
Box 428
Sausalito, CA 94966
or Whole Earth
Bookstore



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If we are living off principal, we are contracting. I have known heirs who lived off their inheritances for many years. Their lives remained unchanged right up until bankruptcy.

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The president of Shell Oil, USA, John Bookout, contends that there is "as much oil to be discovered in this country as has been produced in our entire history." I do not doubt this. That is an exact description of the top of a bell curve. The first oilwell was drilled 69.5 feet into the earth. New oil will be found deep, sometimes 4 to 5 miles down. Instead of $50,000, the new deep probes can cost $20 million per well. There are now seagoing oil platforms that cost over $1 billion to construct. Newer land rigs are thirteen stories high and can drill 9 miles into the earth. Exploration techniques now employ satellites, computers, and robotics. These new technologies will result in significantly higher development costs. There is no question that we will have oil throughout this century and the next, but there is also no question that this oil will be increasingly expensive. There is little chance of running out of oil, but there is a possibility of being priced out of oil. ■

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The underlying difference between a Chevette and a Honda is information, not mass. Each has roughly the same amount of plastic, rubber, chrome, and steel, but one is superior in design, craftsmanship, and performance. This is not to lionize the Japanese; it is to point out the intelligence of the U.S. consumer. Not only are Americans choosing Hondas over Chevettes but they are keeping them longer than they kept cars in the past.

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I do not recommend any investment at all until you have saved between one and two year's income. Without this cushion to fall back on, such investments as stocks, bonds, and real estate do not make sense because they will put your capital at risk. Your savings should be in the most conservative form possible, and that is U.S. Treasury securities. I recommend a rough 70:30 mix of Treasury bills and notes. Treasury bills are short-term borrowings by the U.S. government and have maturities of 13, 26, and 52 weeks. Treasury bills usually pay one to two points less than money market funds and are sold in $10,000 denominations. Treasury notes are generally two- to ten-year obligations, and they generally pay slightly higher rates of interest. They are sold in denominations of $5,000.

The virtue of Treasure securities is the utter absence of risk. At this point in our economy, it makes no sense to save money in any other form, since the purpose of savings is to preserve capital. If you cannot afford these denominations, then the best way to secure your savings is to place them in Capital Preservation I, a money-market fund that buys only Treasury bills and notes. It accepts deposits of $1,000 and offers check-writing privileges. There are only two or three other, newer funds that offer money-market accounts solely denominated in Treasury bills and notes. Capital Preservation is the oldest, has over $2 billion in assets, and its name tells you exactly what it is up to. The address is Capital Preservation, Dept. SN, 755 Page Mill Road, Palo Alto, California 94304; telephone: (415) 858-3600.

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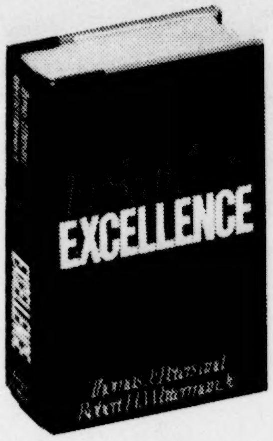
In the "next economy," virtually every product, process, and service will be completely redesigned and newly constituted. We are about to remake our world once again, as we have been doing since the Industrial Revolution. The purpose of making society information rich is to make it work effectively, efficiently, and economically. Remaking our world is not only our task, it is probably the greatest economic opportunity that has ever existed.

In Search of Excellence

In Search of Excellence
(Lessons from America's Best-Run Companies)
Thomas J. Peters and
Robert H. Waterman Jr.
1982; 377 pp.
$21.68 postpaid from:
Harper and Row
2350 Virginia Avenue
Hagerstown, MD 21740
or Whole Earth Bookstore



A refutation of the belief that size alone makes U.S. corporations successful and powerful. Rather than capital, might or force, companies that have maintained consistently high levels of innovation, growth and profitability share other, less-common virtues — sometimes dubbed "motherhoods" because of their platitudinous familiarity. They treat workers as their most important resource; hold customers near the gods in esteem; provide quality goods that last or are the tops in their fields; have long reins to encourage imagination and innovation and short lists of rules to prevent bureaucratization. Managers are hands-on; staffs are lean; groupings are small; and procedures are informal. In short: people are important. As inspiring as the message of the book is meant to be, the unanswered question is how such desirable human traits are so graciously cultivated to produce Mar's Bars, Pringle's, nuclear weapons factories, and napalm. Nevertheless, the book is a reminder to anyone in an organization that "productivity" and humaneness are more synonymous than our nation's business schools would have their students believe. —*Paul Hawken*

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The most important lesson from B.F. Skinner is the role of positive reinforcement, of rewards for jobs well done. Skinner and others take special note of the asymmetry between positive and negative reinforcement (essentially the threat of sanctions). In short, negative reinforcement will produce behavioral change, but often in strange, unpredictable, and undesirable ways. Positive reinforcement causes behavioral change too, but usually in the intended direction.

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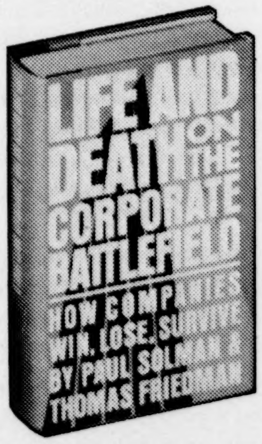
The best companies are pushed around by their customers, and they love it. Who in Levi Strauss invented the original Levi's jean? Nobody. In 1873, for $68 (the price for filing the patent application), Levi's obtained the right to market steel-riveted jeans from one of its users, Jacob Youphes, a Nevada buyer of Levi's denim. And, as already noted, Bloomingdale's invented faded jeans for Levi's. Almost all early IBM innovations, including the company's first computer, were developed in collaboration with the lead customer — the Census Bureau. When did 3M's Scotch Tape business take off? When a salesman, not the technical people, invented a handy desk-top dispenser for what had previously been a narrow-use industrial product.

Life and Death on the Corporate Battlefield

Life and Death on the Corporate Battlefield
Paul Solman and
Thomas Friedman
1982; 248 pp.
$14.95 postpaid from:
Simon and Schuster
Attn: Mail Order
1230 Avenue of the Americas
New York, NY 10020
or Whole Earth Bookstore


LIFE AND DEATH ON THE CORPORATE BATTLEFIELD
HOW COMPANIES WIN, LOSE, SURVIVE
BY PAUL SOLMAN & THOMAS FRIEDMAN

A better title would be "the mind of the corporation." A primer on corporate strategy, especially as promulgated at Harvard Business School, dispensed by the Boston Consulting Group and practiced by big business. Written by the senior and executive editors of the PBS series "Enterprise," it gives a readable account of how corporations tic and untic: how Gillette was taken over within ten years by the person whose patented razor blade it disdained; how Bowmar, the inventors of the LED hand-held calculator, blew it; how Kennecott Copper paid too much for Carborundum so that it would become unattractive to companies wanting to buy it; the demise of the Real Paper in Boston; how corporations decide to milk, starve, feed or bleed different divisions and products.
—*Paul Hawken*

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In the late 1960s, IBM faced a problem with a company called Inforex. Inforex brought out a data-entry system with a video screen so operators could check — and correct — their work as they went along. This system competed with IBM's mechanical keypunch machines, the ones that turned out the "DO NOT FOLD, SPINDLE OR MUTILATE" punch cards. . . .

Keypunch video technology was an easy technical step for IBM to take. But if it were taken, untold thousands of customers would terminate their leases on the card punchers and switch to video. IBM would be robbing Peter to pay Paul. Or, in business lingo, "cannibalizing" its own product, with one product eating into the revenues of another. So IBM stood pat, and Inforex became one of the hottest high-technology companies of the early 1970s.

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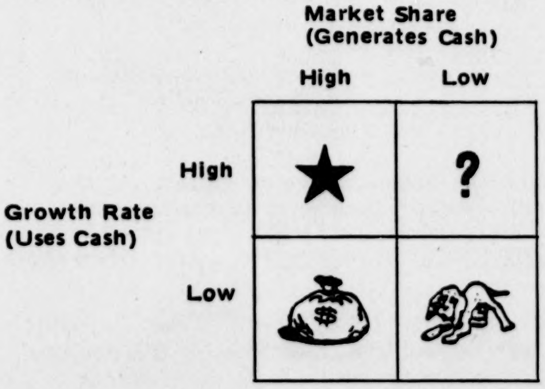
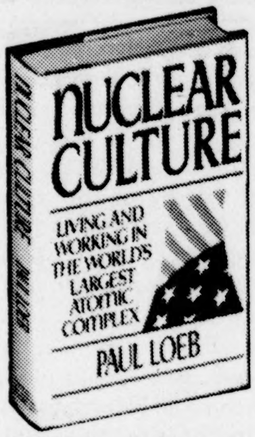
The evidence is overwhelming. A company may diversify or proliferate, but it must, in any case, offer a diversity of distinct products. . . . The strategy can be summarized as a two-by-two box, representing a company's portfolio of products. Each of the four squares within the box has a pictogram, and each pictogram represents a product or product line.

Put as simply as possible, the idea would be to "feed" the Star (give it as much cash as it needs to grow), "milk" the Cash Cow (take the Cow's cash and spend it on other products that need the money more), kill the Dog (shut it down or sell it off), and try to figure out the "answer" to the Question Mark (will it become a Star if you feed it enough cash or will it become a Dog?). The strategy is based on a historical insight: Most successful products have a life cycle in which they travel through each of the four quadrants. They begin as Question Marks, turn into Stars, mature into Cash Cows, and finally, when they're milked dry, end up in the kennel with the other Dogs.



Nuclear Culture

Nuclear Culture
(Living and Working
in the World's Largest
Atomic Complex)
Paul Loeb
1982; 246 pp.
$13.95 postpaid from:
Coward, McCann,
and Geoghegan
200 Madison Avenue
New York, NY 10016
or Whole Earth
Bookstore


NUCLEAR CULTURE
LIVING AND WORKING IN THE WORLD'S LARGEST ATOMIC COMPLEX
PAUL LOEB

I visited Hanford in southeast Washington state several years ago to report on the waste-disposal project going on deep in the basalt underlying that area. At that time, I was earnestly wanting to be sympathetic, to believe, and to be supportive towards what I perceived was a crucial problem facing America — the disposal of radioactive waste — and initially gave the many engineers and public-relations people I met the benefit of the doubt in regards to their efforts to solve that problem.

I took on the nightmare, and my sympathies faded as I continually ran into astounding innocence about personal and collective assumptions concerning the work people found themselves doing. It was a journey through hell to finally realize the lack of perspective and care found in those individuals closest to the critical programs. I left without hope, because once again hope proved to be false by giving me expectations which failed.

Paul Loeb has offered up a unique piece of journalism in his book, and writes convincingly of an area where heartfelt responses come dearly, if at all. I was amazed again and again as he identified and expressed what was going on there, because he was so right and the witnessing of it was such a mystery. He sees the humanity of the people who have built us a national myth, however, and at the same time acknowledges the arc of our own lives enjoying uneasily the benefits of a technics that long ago went out of control.

Not a book with answers. But a reader is reminded by this description of a hermetically sealed society that each of us carries similar impulses — and resistances — to trusting "the men who know best." The Ayn Rand heroes are leaving the cowboy pipefitters and bureaucrats and all of us with a social disease. Now, people are saying at Hanford and everywhere, what? —Terry Lawhead

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Because she was six months pregnant, she admitted the possibility of radiation exposure did make her worry a bit. "But Richard, my husband, doesn't," she said. "I joked once that maybe he should put a dosimeter badge on his trouser fly. But he just repeats these dumb slogans like 'A little nukie never hurt anyone,' then grins at me as if he's proving something. He was never like that before we came. I'm not really scared but it bothers me."

Nuclear Free Zone how-to

In this past November election Ashland, Oregon, became the West Coast's first and the nation's largest legally established Nuclear Free Zone (all of 15,000 population). The seed which eventually bore this fruit was sown in the Fall 1981 **CQ**, which had a letter from Nicholas Albery discussing European Nuclear Free Zones and recommending the idea to U.S. communities. At that time I was working with a peace group in Ashland. We thought the idea of a NFZ suited our city quite nicely and decided to pursue it as a ballot initiative for the November 1982 elections.

We began formulating the ordinance in January by writing to Mr. Albery and checking to see what other cities might have on their books along this line. Nothing we came across seemed really to fit what we had in mind. Either they had too much legalese or they didn't really make it clear that the city was banning the full nuclear cycle of bombs and component parts as well as nuclear energy and waste storage. So we sat down and wrote up what we wanted for Ashland and figured we'd see what happened. By May of '82 we were ready to begin the initiative process. This involved some preliminary paperwork and then collecting 1150 (15 percent of the previous mayoral election) valid signatures from registered Ashland citizens. About this time Garrett Park, Maryland declared itself a NFZ and the Free Zone clearinghouse in Baltimore was set up, so we were able to tie into a developing network, which was encouraging.

We began campaigning in early October with a brochure addressing the major questions that had arisen in our discussions with people about making Ashland a NFZ. Is it constitutional? Yes. Will it ban the medical use of radioisotopes? No. Will it hurt business? No. On the contrary, it could enhance the business environment.

We campaigned actively in the local newspaper with ads and letters to the editor. We raised campaign funds by selling an endorsement ad at five dollars a signature (or a contribution). We collected around $1500 and 400 signatures, which made a very impressive full-page ad on the eve of the election.

The five of us who were actively preoccupied with it were continually amazed at the response the idea received. The local artistic community organized a week of nightly entertainment called "The Nuclear Free Show Live" and donated proceeds to the campaign. Some local dentists donated the proceeds from a day's labor, and numerous individuals collected endorsements and donated time and energy. . . .

We did have fairly strong opposition from part of the established business community. This was mostly around the ban on component parts and the wording of the ordinance, which was admittedly imperfect, but even the opposition used the approach of encouraging support for the freeze while opposing the free zone. . . .

The vote itself was very close, with the measure trailing until the final tally came in, at which point, as the local announcer stated, there was a "radical shift." By a 53 percent to 43 percent margin (3636-2989) Ashland voted to become a Nuclear Free Zone. Interestingly there were three city council positions also being voted on. They were won decisively by three women, all of whom supported the ordinance. The other nine candidates in the field were male and either opposed the measure or waffled about on it. . . .

We have since received numerous inquiries from others interested in NFZ status. We are in the process of putting together a booklet on "How to Make Your Community a Nuclear Free Zone." It is based on the material which emerged from our campaign and what we learned from that process, ideas, mistakes, ups and downs, in a more or less step-by-step format. We're asking $5 to cover printing and shipping from Peace House, P.O. Box 524, Ashland, OR 97520.

Don Skinner
Ashland, Oregon

Local political rules of thumb

I enjoyed your "Rules of Thumb" (CQ Fall 1982). I notice you are also interested in local political processes. My political experience includes management of local Mayoral and State Senate campaigns. Since 1980 I have also represented 15,000 East Lansing and area residents on the Ingham County Board of Commissioners. I was elected to a second term in November, 1982. Based on this experience, I offer some "purely political" rules of thumb for anyone who is thinking of campaigning for local office:

- If more than 40% of likely voters have a favorable impression of an incumbent six months before an election, then he/she is probably unbeatable.
- For every person who gets involved in your campaign (by contributing money, putting up a lawn sign, distributing literature, signing an endorsement letter, etc.), you can probably count on 10-15 votes on election day.
- If you are personally canvassing door-to-door within two weeks of an election and three of ten likely voters both recognize you and give you positive feedback, you will probably win.
- When you are canvassing door-to-door you should optimize your time/voter contacts by spending no more than 20-30 seconds with each person you meet. (Most people make a "favorable/unfavorable" decision within that time and most will want to get back to whatever they were doing when you interrupted them. However, you should take time to discuss issues with interested persons.)
- A percentage of voters will be for or against you based purely on your party affiliation. Only a small percentage of voters are truly independent and will consider you without bias. (See your local political hack to fill in the percentages on this one. It varies widely by district.)
- Approximately 5-15% of voters in a local race will vote with no information at all (more if you are at the bottom of a long ballot). You will get a random half of these these votes.
- Persons with strong, aggressive personalities who have "programs" to sell get elected half as often and (when they do) last half as long as accommodating, compromising persons who are interested in "constituent services."
- Tall persons with short names get elected twice as often as short persons with long names.

The following are cliches or truisms — not rules of thumb. However, they must be considered along with the rules:

- All rules of thumb must be modified for particular races and/or districts. They are also modified by candidates with good political sense and/or money (or lack thereof).
- No political rule of thumb applies to lucky (or unlucky) persons.
- There isn't a horse that can't be rode and there isn't a rider that can't be throwed. (Attributed to John Connally and others.)

Tom Wilbur
East Lansing, Michigan

Winning isn't always winning

. . . about politics. I live in Mendocino so I can't come to the Local Politics seminar series. Been meaning to write about politics ever since Parsons' article on running for office ("Don't Beg, Take Control," Summer '82 CQ). When you describe the series as for people who are "active" in politics, I assume you mean taking control through taking office, or at least helping someone else take office. I had a strong reaction to Parsons' article and, to the extent that your political seminars share that definition of "active," would feel the same about them.

Taking office isn't the only or even the best way to take political control. Parsons confused his change of status with his change in political behavior. He used to join causes, form human blockades, circulate petitions . . . and was ineffectual. Now he goes to meetings, does his homework, chooses his issues, uses the media . . . and is effective. Any private citizen can do the same, and if he/she stays with it, can get as much power as one person should have.

Elections are either-or confrontations. Him or Him, Yes or No, Her or Her. They simplify, polarize, divide. At worst they eliminate communication. At best they postpone it. It's useful to be able to win an election, for yourself or a favorite candidate, but it is the smallest piece of the work.

An active citizen-participant can usually do more with fewer restraints than an official. The same rules apply: hang in, go to meetings, choose your issues, use the media, do your homework. I'd add: ration your righteous indignation — its power dissipates with too much exposure. And: learn to empathize with the other points of view, genuinely — at the very least this will tell you what issues are just too dearly held to modify, and you'll know when confrontation is going to be necessary. It will also help you know when compromise is possible, saving everybody a lot of effort and grief.

Winning isn't always winning.

A few years ago the old-time families in the village where I lived got upset by the numbers of hippy newcomers who were in and out of the school so much. The teachers had enlisted many of us to teach "mini-classes" one day a week. The oldtimers got up a petition to the school board (in town, 15 miles away) demanding a school for "Us" and a school for "Them."

Somebody counted the kids in school and found that there were none of "Us" there. The older families had nearly died out without noticing. All the children were from new settlers. Clearly we new ones had "won" and didn't have anything to fear. Just as clearly, a profound division of the community was threatened. The older families felt in danger of extinction (maybe a memory of how they had obliterated the Pomo Indians when they were the newcomers).

The confrontation had happened and we new ones were the winners. We didn't want a victory, we wanted a whole community. So we got the school board to let us form a satellite board from our village. A list was posted on the bulletin board at the general store, inviting anyone who wanted to be on the new board to nominate themselves. We made up ballots, and one sunny day we took turns at an "election" booth on the store porch. It was a fantastic day. People came out to vote who were never seen in public. The total votes were twice the numbers of regular elections.

The group chosen was as representative of the community as it could possibly have been. All shades of opinion, ages, lifestyles were there. We met for three months. Both sides shared their fears and needs. Both sides compromised, but that really wasn't the point. The important thing was that the newcomers rejected their political power in favor of communication and reassurance. The community remained whole. The school atmosphere relaxed.

None of this would have happened if we'd become politically active in the normal sense, and dealt with the situation by replacing the incumbent (oldtimer) school board member. Office-holding is a limited, and limiting, kind of power. . . .

Neva Beach
Mendocino, California

The Extent of Local Political Power

It is stronger, cheaper, more responsive, more intelligent, and more effective than the other kind.

by Senator Peter Behr

AFTER HAVING SPENT eight years in the wilderness up in Sacramento and having returned and had time to contemplate, I came to the conclusion that local power has far more effect on everyone's day-to-day life than Sacramento, and indeed than the federal level of government. I was in a joint newspaper interview with Stewart and came out with the usual phrase about "higher level of government," and he corrected me, and I'll never use that phrase again. He said, "Isn't what you mean a more distant form of government?" Indeed that really is the fact.

Many people figure that local elected officials are nice but they don't do much, and they don't really have the qualities and concepts of persons in more distant office. Let me tell you, if you took a cross cut of city-council persons of our eleven cities [in Marin County], or the boards of supervisors, I can assure you that the general level would be far higher than in the state legislature, at least during the eight years I was there, and I'm sure that it's even more so now.

There is one difference that is quite marked but not often mentioned between local government and state and federal government. We all from our early days have heard about the tripartite form of government – the separation of powers into the legislative and the executive and the judicial. To some extent, with a certain amount of melding, this is still true at the state and federal level. On the local level, boards of supervisors exercise legislative power. But they also exercise executive power and administer the laws which they enact through county officials. And they at times exercise quasi-judicial power, or have the right to. As a county supervisor I was on the assessment appeals board listening to irate citizens for a long time in regard to whether they were over-assessed in their properties. That's a quasi-judicial power.

I'll give you an example that you don't know about but which we discovered in a most amusing way. It was amusing because we won, and so I remember it. There was a church in Los Angeles known as the First Christian Church of America. They had bid on and acquired the Brazil property on the slopes of Mount Tamalpais. The state wanted it and had the money to buy it, but the church refused to sell it for a reasonable price. Of course you don't go to condemnation. So I called in Doug Maloney, our county counsel, and said let's do some brainstorming, because we can't let this church get away with it. He said there's an obscure section in the government code which has never been used, permitting the board of supervisors to convene itself as a board of inquiry on any subject relating to the health, safety, and welfare of the county, with county-wide subpoena powers and *subpoena dusis tacem* powers. That was just what we needed. We subpoenaed their three ministers and all their documents from a penthouse down in Los Angeles. It was a real-estate scam, as it turned out, and they didn't really want to respond, so the state bought the property and that was behind us. We do have those kinds of powers.

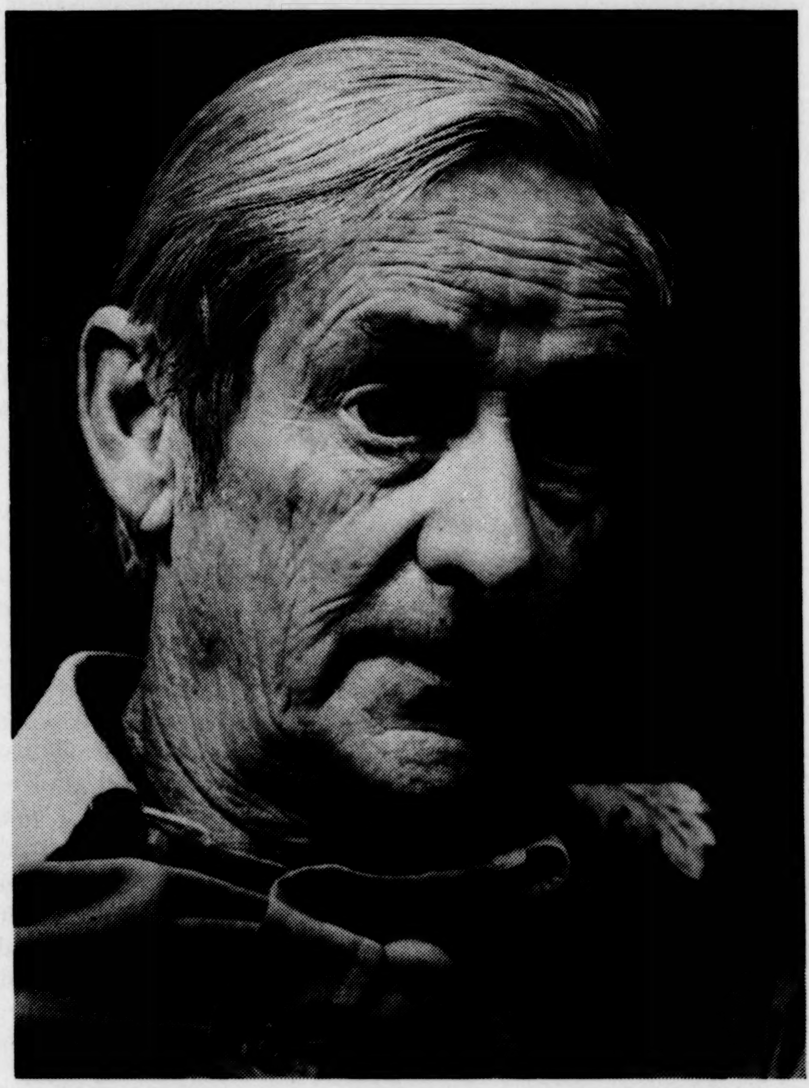
You all know that all local offices are nonpartisan, which means that there's no significant control by our two major political parties. In addition, by and large, unless you get to the big counties and the big cities, candidates don't have to put together a large sum of money to run for office, so when they get in office they are not beholden to large donors.

I've discussed the power of the board of supervisors, but now the next question is their power over what. Well, of course they fix the budget, and that gives them the power of the purse. In addition, and different from city councils,

Regarded as one of the true statesmen of California, retired State Senator Peter Behr started as a city councilman in Mill Valley in his 40s, moved on to become a member of the Board of Supervisors of Marin County, and then spent eight years at the State Senate in Sacramento. He is a Republican, an environmentalist, an effective legislator, and a first-rate teacher. His reputation is such that his seminar on "Local Politics" for **Uncommon Courtesy** *drew a full house, including three active city council members. The seminar went for four evenings, titled "The Extent of Local Power," "Citizen Lobbying," "Running for Office," and "Serving in Office." This article is the first evening.*

He is doing another "Local Politics" seminar series every Wednesday in April at 8 p.m. at the Mill Valley Community Center. Call (415) 332-6106; $40 for the series. *–Stewart Brand*

A lot of state and federal programs are administered locally. . . . If you administer a program, you've got the handle on it.



RAY BALTAR, PACIFIC SUN (1978)

they have been delegated by state law a large number of state functions which are administered at the local level, and these state functions cover not only the unincorporated areas but also the incorporated areas. We have to recognize that a lot of state functions and a lot of federal functions are administered locally. Locally actually means any place in the United States (if you're there it's local). If you do know how this county runs, or you know how a small city runs, you know how every county in the state and every city runs. The difference is only in degree, not in kind.

Let's talk about the administration of justice in terms of delegation. You have probation, which throughout the county is handled entirely at the county level. All juveniles are handled at the county level. The whole administration of justice is in the hands of local officials. The sheriff is elected, the district attorney is elected, the judges are elected, even the coroner. The public defender and the chief probation officer are appointed by the board instead of being elected. Justice consumes 30 percent of the total budget of Marin county (total budget being something in the neighborhood of $85 million this year) – which is exceeded only by the administration of state and federal welfare programs and health programs. That part of the budget covers the AFDC, the aid to the blind, foster home care, adoptions, food stamps, mental health, and public health (presuming there's a difference between public health and mental health), and it's interesting to note that this is 38 percent of the budget, by far the largest single item, and yet it doesn't include a single elected official. They're all appointed by the board. I think the reason for that is that it's so complex that nobody wants to run for the offices anyway.

Well, those are some of the duties of the county which are functions of state law, but they're terribly important, because if you administer a program, you've got the handle on it. You make the day-to-day decisions that determine who gets on AFDC, and which children get foster home care, and whether or not foster homes can be found (which is always a terrible problem), and we also fairly recently have taken over the whole problem of adoption within the county. But this is only the bare-bones beginning, if you'll excuse the pun, in regard to what the county does.

When I was on the board, the thing that I was really proudest of (pride is a venal but not a mortal sin) was that after a two-year battle we "open area" zoned all public lands in Marin County. Our target was the Marin Municipal Water District, which, like now, was making little gurgling noises about lousing up their 18,000 acres of open space on the mountain. We were told by Sam Gardner, who later rose to the eminence of the superior court, that the district was a business and that they should make money from it. They wanted to sell off this land and so forth, so we just zoned all public lands in Marin County open area except for lands owned by cities, and certain corporation yards, and things of this nature. I'm not sure that's legal, but it stuck, and nobody's challenged it, and now it's gone into the tradition of the county. The result is that the land has no value, so they can't sell it overnight at some secret meeting where it isn't even on the damned agenda. They have to go through the planning commission and the board, and that's the long ceremony which causes the public to become aware.

Another thing: if local government is against a proposal, whether it be through the County Supervisors Association or the League of California Cities, that proposal is in deep trouble in Sacramento. If they are in favor of it, it doesn't mean by any means that the proposal will be successful, but it means that it's on its way.

I'd love to take questions, that's the most fun of all.

Q: What do you think or suspect is the difference between the quality of the politicians at the local level and the state and federal?

Behr: I think there's an advantage at the local level that we don't have in Sacramento. The advantage is this: For local office you can get persons who are active, who are pursuing their careers, and at least at the city level they can take this additional burden on and not make it their be-all-and-end-all, not be consumed by it. So I think they have a better perspective.

I also think, and this I'm certain of, that at the local level you learn humility. At the state level you learn whatever the reverse of humility is. When people come to state office from the local level, you can see the difference immediately when they get into the legislature, both in terms of their effectiveness and in terms of their attitudes. They don't think they're little tin gods. The ones who haven't been through some local elected experience are arrogant. The whole capital is built around making the legislators feel good – all sorts of perks. They begin to feel that if they have all these perks they must be pretty important. I find that very discouraging.

Q: What do you think about the power of special interests at the local level versus state level, because I see it being parallel . . .

Behr: I don't think it's parallel at all – except in the large cities and large counties. I wouldn't argue about that. But I would say this: I think that if the legislators are not being bought and paid for, they sure as hell have got a lease on 'em. They have a lease for this reason: today they need a lot of money to have a reasonable opportunity to be reelected. (If they don't want to be reelected you can't do a thing with 'em unless they want to get to higher office – and everybody thinks they're entitled to higher office as soon as they're sworn in.) They are being bought because they need that money and without it they can't move on, and it's probably the single greatest risk to our democratic system. At the local level it's not that kind of a risk because you don't need that kind of money, and if you accepted it and it became known it would be resented.

Q: [About scale of budgets.]

Behr: Having been involved in city budgets, county budgets, and for eight years in state budgets, I can assure you that money is spent more casually in larger sums. As the size of the government increases, you reach the stage where you can't comprehend – although you can discuss with some elegance – what the hell a billion dollars is. A billion dollars being a thousand million dollars, you go one percent out of the way, and what have you lost? Ten million dollars, I think. We spend a lot more time on comprehensible subjects with sums that can be understood and I think we make fewer mistakes, with a good deal less waste and more concern about the money being spent well, as the size of government becomes smaller and more local.

Q: A lot of planning that local communities or counties do, I think some of that would never have been done if the state hadn't mandated it be done and in a lot of instances provided the money to do it.

Behr: I buy that. I think we're not far apart. I would suggest though that when local government is unable by the very nature of its size to take care of problems which cross county lines and cover whole regions or the whole state, and if they've been proved unable to do it, then you have a vacuum and the state should step in. You've seen it first with the Bay Conservation and Development Commission. Then you've seen it with the coastal act, and obviously with air and water pollution. They can't be handled by any single local jurisdiction.

Q: I want to change the direction a little bit and ask you a personal and practical question. How do you deal with the personal anger and venom and occasional public attacks against you?

Behr: I think anger is a luxury which is therapeutic but very costly in an elective official. Every time I've gotten angry and said things in anger, I've had either abjectly to apologize or kick myself because I've probably been stupid and wrong. I think also, and this is meant in a kindly manner, but I'll say it in a manner that you can remember, because I think it's very necessary: I think you have to suffer fools gladly. And when you call them fools what you're really saying is, they may be intelligent, but they're misinformed. I suppose part of the job of being an elected official is the kind of therapy you give persons when you're willing to hear them out. I think that's very important to *you* and equally important for them. It's tough, sometimes.

Q: How about the relation of local government to federal? One example is the moving of nuclear waste products through your community. Here in Marin County we voted that we didn't want to go for it, and the government said, we aren't asking, we're telling. Now, shouldn't we resist that type of activity from the federal government much more strongly than we do?

Behr: I think so, but then you come into a field which is important for the functioning of federal government. You come into the field of preemption. It's quite clear that without the right to preempt certain subject matter federal government couldn't carry on. So I think that if you're going to take this particular part of the whole miserable problem you're gonna have to go to the jugular, and once you've got the beast in your grip don't let go. Then, if you've got a good grip, all of these tangential factors will fall down. I fully believe in that. I don't think you should compromise. I gotta tell you, I think the art of compromise is essential for an elective official, but there are certain subject matters which are matters of principle and conscience, and if he can't separate those matters from the run-of-the-mill items that he gets from day to day, and refuse to compromise, then I think he's short-changing his constituents and he's demeaning himself. ■

UNCOMMON COURTESY

SPRING COURSES

by Stewart Brand

SOME CLICK, some don't. "Home Care Training" hasn't clicked (the course is good, but enough people don't come to it, no matter how cheap, no matter how well publicized). "Business As Service" clicked big.

It was a two-day bus tour of exemplary businesses in the San Francisco Bay Area, guided by Paul Hawken, Michael Phillips, and me. The 50-seat bus filled promptly and overflowed to the May repeat. Ten flew in from out of state in time to be impressed by all-time-high tides and ferocious surf.

"Exemplary" meant successful businesses doing successful service. The first day turned out to be Service as Business. We visited the Green Gulch Greengrocer, established by the San Francisco Zen Center to bring together its ghetto neighborhood — and highly successful at that. Then lunch at the Zen Center's renowned Greens Restaurant. Then a tour of Fort Mason, the world's first "Arts Park" — 50 non-profit enterprises using old military buildings now owned by the National Park Service. Fort Mason as a whole runs at a "profit," which means it improves as it goes. Then a cluster of businesses run by Delancey Street to train its ex-cons, ex-addicts, ex-etc. in the ways of noncriminal income. They learn, they spread good will for Delancey Street, and they help pay Delancey's way.

Following an evening's discussion, the next day we hit the East Bay. First the Owner Builder Center, a Berkeley-based operation that is starting to franchise nationally, teaching a range of home construction skills. Then Nolo Press, an outrageously successful publisher of legal do-it-yourself books. Then a place called Mudd's for lunch, incorporating a spectacular food garden. Then Paul's own Smith & Hawken Tools, demonstrating that the higher the integrity of the business, the more customers support it.

People in the course seemed about equally divided between ones coming from experience in business looking to do more service, and people long in service wanting to become more businesslike. Many were in the process of making career decisions. During the two days I came to realize that business perspective helps keep a service honest and service perspective helps keep a business honest. That's why the course clicked. That plus the glee of being on a bus.

Next time we'll visit some of the same and some different businesses. **CoEvolution** was requested as a tour stop. Could be interesting for both of us. ■

BUSINESS AS SERVICE

Two-day tour

Paul Hawken, Michael Phillips, Stewart Brand

WHEN: 9:30 a.m. to 10 p.m., Thursday, 9:30 a.m. to 5 p.m., Friday, **May 5-6**, 1983.

WHERE: Bus leaving from Fort Mason, San Francisco.

FEE: $160 (lunches included).

REGISTRATION: Deadline April 30.

UNCOMMON
COURTESY
SCHOOL OF
COMPASSIONATE
SKILLS

LOCAL POLITICS

Wednesday evening seminars

Senator Peter Behr (see article, p. 139)

WHEN: 8 to 10 p.m., Wednesdays, **April 6, 13, 20, 27**, 1983.

WHERE: Mill Valley Community Center.

FEE: $40 for the series.

REGISTRATION: Deadline April 1.

STREET SAINT SKILLS

One-day intensive workshop

For city denizens this intensive workshop teaches public helpfulness. From lecture, role-play, physical exercises, and discussion, you'll learn how to spot street trouble before it develops, act effectively in emergencies, be an accurate witness, make a binding citizen's arrest, summon aid, and encourage other "street saints."

Chief instructor TERRY DOBSON is a fifth-degree black-belt aikido instructor and author of **Safe and Alive** (reviewed in the Spring 1982 **CQ**).

WHEN: 9 a.m. to 9 p.m., Saturday, **May 14**, 1983.

WHERE: Yosemite Institute, Fort Cronkhite, Golden Gate National Recreation Area.

FEE: $70 (includes meals).

REGISTRATION: Enrollment is limited to 40. Registration deadline is May 4.

REAL FIRST AID

One-day intensive workshop

It is not a question of whether you will need first aid skills, but when. The emphasis in this introductory course is on realism — both in preparing you for real world situations (not just an isolated laceration or compound fracture but the darkness and screaming and chaos of an automobile accident, for example) and in the realistic training techniques.

Chief instructor NANCY OLIVA teaches Emergency Medical Training at College of Marin and works at Marin General Hospital in the Emergency Room as a Registered Nurse.

WHEN: 9 a.m. to 5:30 p.m., Sunday, **May 15**, 1983.

WHERE: Yosemite Institute, Fort Cronkhite, Golden Gate National Recreation Area.

FEE: $60 (lunch included).

REGISTRATION: Enrollment is limited to 40. Registration deadline is May 4.

This course is designed to complement the "Street Saint Skills" workshop on the previous day, so you may take either one independently or make a fierce weekend of it and take both — at some saving of time and money. "Real First Aid" by itself costs $60. Combined with "Street Saint Skills" the fee for both is $105, if you take lodging and meals on your own. With lodging and meals included the fee is $130 for the whole weekend.

WELCOME TO FIRE SEASON

One-day intensive workshop

You can help protect yourself and your neighbors from the state's greatest property hazard by learning the basics of how to prepare your structures, land, and self to prevent fire (the best fire is the one that never starts) and by learning the techniques of fire suppression so you know what to do during the critical minutes before professional crews arrive and how to help once they're on the scene.

Instructors are GERALD MYERS, Chief of the Beginnings Volunteer Fire Department in Briceland, California, author of the survey "Community Fire and Emergency Medical Services" in **The Next Whole Earth Catalog**, and an instructor from the San Francisco Fire Department. You should dress for outdoor work in the highly variable climate near the beach in the Marin Headlands. Bring a long-handled shovel or McLeod if you have them. Lunch is provided.

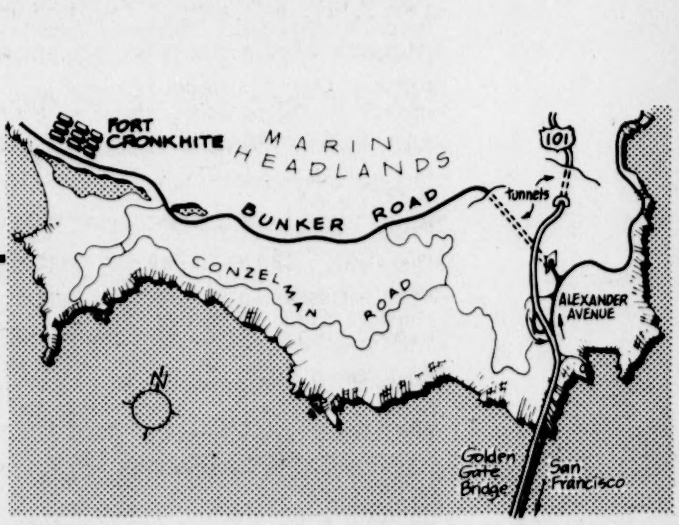
WHEN: 10 a.m. to 5 p.m., Saturday, **June 4**, 1983.

WHERE: Golden Gate Energy Center, Fort Cronkhite, Golden Gate National Recreation Area.

FEE: $50 (includes lunch, snacks, fire fighting booklet).

REGISTRATION: Deadline May 25, 1983.

To sign up or request information, write
Uncommon Courtesy
Box 428
Sausalito, CA 94966
or phone (415) 332-6106, Irmine Steltzner,
Monday-Friday, 10 am to 5 pm.



Adventures of a Bystander

I put this next to e.e. cummings' **six non-lectures** *(* **NWEC** *p. 574) as one of the best books about learning and one of the best autobiographies in the language. Drucker, the famous management writer, has known some of the most interesting people of the century. He tells their stories compellingly, and each one ends with a lesson — a real one that changed his understanding or his life or, in some cases, our times.*

I think Peter Drucker is an angel. He writes like one, and insight as frequent and lasting as his is not human.
—Stewart Brand

●

It took me many years to realize that I had stumbled upon a method. Perhaps I did not fully understand this until, years later, I read — I believe in one of Martin Buber's early books — the saying of the wise rabbi of the first century: "The Good Lord has so created Man that everyone can make every conceivable mistake on his own. Don't ever try to learn from other people's mistakes. Learn what other people do right."

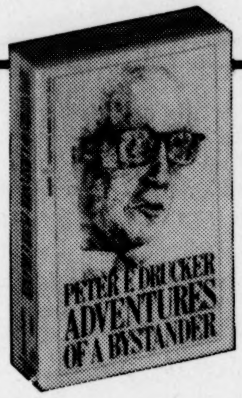
●

Noel Brailsford was very much a "loner." But he also represented an older English tradition than Fabians or Bloomsbury or trade unionists or Marxists: a tradition going back to Wycliffe and Piers Plowman in the Middle Ages; to the Levelers and Diggers in the seventeenth century; and to the Chartists before 1850. It is a tradition that invokes the "bowels of compassion" rather than the "solidarity of the proletariat"; a tradition that asks for justice for the poor rather than for revenge on the rich; a tradition of individual conversion rather than governmental action, of dignity rather than welfare; a tradition of conscience, not of power. It is a tradition of radical dissent. Brailsford was a "loner" indeed. But he was not a "crank" or an "eccentric," he was a conscience.

●

Bucky Fuller and Marshall McLuhan exemplify to me the importance of being single-minded. The single-minded ones, the monomaniacs, are the only true achievers. The rest, the ones like me, may have more fun; but they fritter themselves away. The Fullers and the McLuhans carry out a "mission"; the rest of us have "interests." Whenever anything is being accomplished, it is being done, I have learned, by a monomaniac with a mission. Bucky spent forty years in the wilderness, without even the Children of Israel to follow him. Yet he never wavered in his dedication to his vision. McLuhan spent twenty-five years chasing his vision until it captured him. He too never wavered. And when their time came, both had impact.

Adventures of
a Bystander
Peter F. Drucker
1979; 344 pp.
$6.45 postpaid from:
Harper and Row
Keystone Industrial Park
Scranton, PA 18512
or Whole Earth
Bookstore



The monomaniac is unlikely to succeed. Most leave only their bleached bones in the roadless desert. But the rest of us, with multiple interests instead of one single mission, are certain to fail and to have no impact at all.

●

Once (a General Motors Policy) committee spent hours discussing the work and assignment of a position way down the line — as I remember it, the position of master mechanic in a small accessory division. As we went out, I turned to him and said, "Mr. Sloan, how can you afford to spend four hours on a minor job like this?" "This corporation pays me a pretty good salary," he said, "for making the important decisions, and for making them right. You tell me what more important decision there is than that about the management people who do the job. Some of us up here at the fourteenth floor may be very bright; but if that master mechanic in Dayton is the wrong man, our decisions might as well be written on water. He converts them into performance. . . .

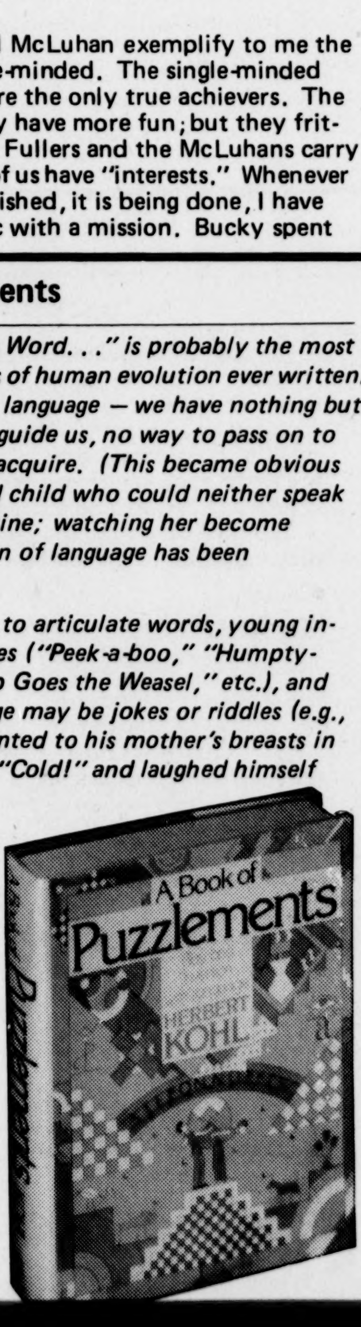
"I know," he continued, "you think I should be a good judge of people. Believe me, there's no such person. There are only people who make people decisions right, and that means slowly, and people who make people decisions wrong and then repent at leisure. We do make fewer mistakes, not because we're good judges of people but because we're conscientious. And," he emphasized, "the first rule is an old one: 'Never let a man nominate his own successor; then you get a carbon copy and they're always weak.' "

A Book of Puzzlements

"In the Beginning was the Word. . ." is probably the most accurate historical analysis of human evolution ever written. Without words — without language — we have nothing but the immediate present to guide us, no way to pass on to others the knowledge we acquire. (This became obvious to me through an adopted child who could neither speak nor communicate at age nine; watching her become human through acquisition of language has been keenly enlightening.)

Even before they are able to articulate words, young infants delight in word games ("Peek-a-boo," "Humpty-Dumpty," "So Big," "Pop Goes the Weasel," etc.), and some of their first language may be jokes or riddles (e.g., the nursing baby who pointed to his mother's breasts in turn, saying, "Hot!" and "Cold!" and laughed himself silly at his own humor). Word play is as essential to intellectual development as physical play is to the development of coordination, balance, and strength.

A Book of
Puzzlements
(Play and Invention
With Language)
Herbert Kohl
1981; 287 pp.
$15.58 postpaid from:
Schocken Books
200 Madison Avenue
New York, NY 10016
or Whole Earth
Bookstore



Herbert Kohl's book of puzzlements is a treasury of word games — from crossword puzzles, anagrams and riddles to ciphers, codes, puns, counting rhymes and pictographs. It is a literally endless source of linguistic fun, as Kohl presents not only the games, but instructions on inventing your own. This is a great family book, for kids and adults — preferably together. *—Carol Van Strum*

●

A group (preferably six or more players) takes turns passing around a dictionary. The person with the dictionary chooses and announces a word nobody knows (if you know, or think you know, the word, speak up so another word may be chosen). While that person writes the real meaning on a piece of paper, all the others write a phony one on their pieces of paper. The definitions are passed to the announcer, who shuffles them and reads them aloud, trying to maintain a straight face.

The game is generally played one of two ways: seriously — real thought is given to creating convincing and plausible phony definitions; or (the way I prefer it) humorously — using the word's sound and structure to suggest hilarious meanings.

If you wish to keep score, each player receives two points for guessing the correct definition, and one point for each person who voted for the definition he authored.

The Paper Model Company

Great instructions, tiny cost (mostly $3-$12), wonderful exotic subjects — especially the castles, Neuschwanstein, Eltz, Lichtenstein, Bruneck, etc., plus classic airplanes, ships, etc. Class at a bargain price. —*Stewart Brand*

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$1 from:
The Paper Model Company
708B Mildred Street
Philadelphia, PA 19147

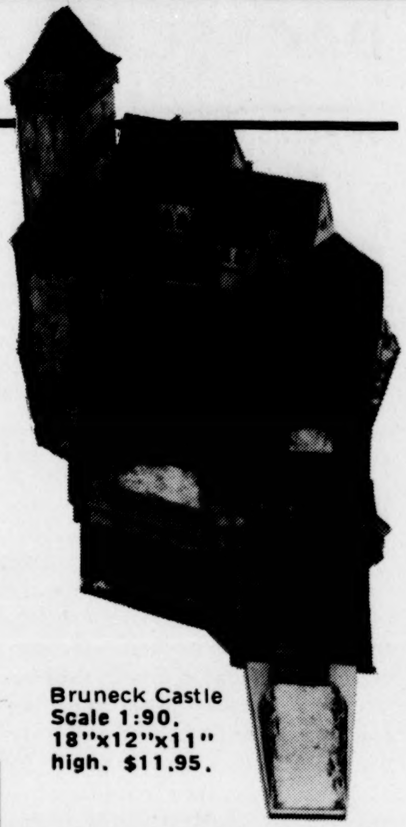
●

Expert model builders have learned through experience to keep these three points in mind:

1. Work slowly. Enjoy doing what you're doing. Take your time. You might be proud of the finished model and enjoy looking at it. But sooner or later, someone is going to sit on it. All you'll have left is the memory of countless ecstatic nights spent gluing impossibly small pieces of paper into impossibly small spaces.

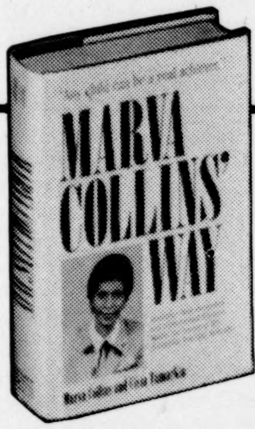
2. Work carefully. Frustration and anger as a result of messing up the job because you did not pay attention is potentially lethal to the unfinished model. Protect it by being extra careful.

3. Work precisely. A paper model is an exercise in precision. All possible "cutting of corners" has already been done by the designers. Now your task is to follow their directions to a T — slowly, carefully, precisely.



Bruneck Castle
Scale 1:90.
18"x12"x11"
high. $11.95.

Marva Collins' Way



Marva Collins' Way
Marva Collins and
Civia Tamarkin
1982; 227 pp.

$12.95 postpaid from:
J.P. Tarcher, Inc.
9110 Sunset Blvd.
Los Angeles, CA 90069
or Whole Earth
Bookstore

"Those who can, do; those who can't, teach," the saying goes. Compounding the effects of television, non-stimulating home environments and parental indifference is a growing lack of plain literacy in the nation's teachers. (A friend has documented this fact with a collection of notes sent home by her child's second-grade teacher: misspellings are rampant, and the grammar is nothing short of catastrophe, e.g., "She done real good today.")

Marva Collins, the controversial teacher from Chicago whose ghetto black children — often public school rejects — are reading Shakespeare and Mark Twain in their first year, offers a remedy for the declining competency of our teachers. (You may remember Marva from a CBS "60 Minutes" program a few years ago.) She became a celebrity for her success with "uneducables" that surpassed many programs for gifted children, and educators, parents, publishers and politicians descended on her, desperate to discover her "secret." That secret proved disillusioning to modern educators: it was too simple, and involved too much work and too little technology. It required none of the expensive equipment that currently substitutes for education, none of the endless mimeographed worksheets and classy workbooks that clot our children's minds with boredom.

Marva's "secret" recipe was a constantly growing collection of quality books gleaned from junk shops and used book dealers, and Marva's unshakeable convinction that any child — regardless of the labels dooming it to failure in other schools — could learn to read, to love reading, and thereby learn to learn and to love learning. Her most difficult and challenging task is initially to rebuild the self-esteem and faith that public schools have ground to powder. "You are brilliant," is her oft-repeated message to her students. "It is not you who have failed, but your teachers. I will not fail." And she doesn't. . . .

Marva Collins' Way *is written by Marva herself, alternately with Civia Tamarkin, a journalist who spent "more than a year of observing her teaching, of following her students' progress, and of talking to parents, psychologists, and other educators to separate the real Marva from her myth.*

"She wasn't perfect, she wasn't a superwoman. For that matter, she was neither an academic, a scholar, nor the perfect grammarian. But what could not be disputed was that Marva Collins motivated children and made them want to achieve. That is what this book is all about — a teacher teaching." (p. 15)

Marva's book could replace most of our specialized graduate "education" programs that condition teachers to failure with clinical labels ("dyslexia," "minimal learning dysfunction," "hyperactive," etc.) that place the blame on the child. **Marva Collins' Way** *is an enlightening and instructive — and lively — book for parents, administrators, teachers, and all taxpayers.* —*Carol Van Strum*

●

I stress proper speech and pronunciation with my own students. I try to get them in the habit of using correct grammar when they speak, and I have them read aloud every day so I can check pronunciation as well as comprehension. Having children read silently in class only allows their mistakes to go unnoticed. I have heard children read *capa-city* for *capacity*, *denny* instead of *deny*, or *doze* instead of *does*, treating the final *s* as though it pluralized the word *doe*. Children frequently reverse letters when they read. For example, they confuse *sacred* and *scared*, *diary* and *dairy*, *angel* and *angle*. If children read silently, they continue to make those mistakes.

●

Countless studies have been done on how to teach inner-city students. To me it seems perfectly plain that inner-city children should be taught the same way other children are taught, because all children want the same things out of life. A ghetto child learns in the same way as any other child and is equally capable of reading Dante, Homer, Pascal, or Chaucer. A child — any child — may not go on to college or become a great scholar, but there is no reason he or she can't gain some appreciation for literature or get something worthwhile out of discussing the great books.

I don't hold with a "ghetto approach" to teaching. The experts claim that correcting an inner-city child's grammar will damage his or her identity. I believe that not correcting grammar will damage that child's whole life. While others lowered their standards for inner-city students, I made mine higher.

●

Any teacher who leaves a child as she found him negates her duty as a teacher.

BACKSCATTER

Echoes from readers back to CoEvolution Quarterly

I'd pledge allegiance

CQ introduced me to the concept of Gaia. Has anyone thought about a flag for Gaia?

Stephen Hodgkin
Hughes, Australia

Pollyanna-free small-scale philanthropy

This is as much a request as a suggestion. Those of us who are concerned about the cuts in government funding for human services could use some concrete, educated advice on how to place our "spare" dollars with agencies in our communities that are performing services that matter to us. I have small amounts of money in mind — say, the $5 to $100 range. (The old 10% tithing is too burdensome for many of us right now — but should we revive the concept?)

There are questions on how to decide what amount of money to earmark for donations, as well as on where, when, and how to place it. Perhaps you have access to someone (or several someones) who could speak to this issue. What can we accomplish by giving small amounts of money? Where will it do the most good? Should we try to designate specifically where we'd like to see the money spent (for example, ask the library to spend our dollars on the bookmobile)? How can each of us make these judgments for ourselves?

The agencies in my community that come to mind in this regard are the community and public radio stations that I value, the public library's subscriptions to journals in my field of interest, and the ongoing projects of a couple of churches. But is it wise to favor local agencies over national and international ones? Maybe all the money should go to support political campaigns to change the developing set-up?

I'd like to see this issue approached in a manner that avoids the "visit-a-shut-in-today" mentality (and, if it's possible, the "many drops in the bucket make a full bucket" tone). The real issue, I think, is how to feel *purposeful* in this sort of action and choice.

Susan Marie Swanson
Minneapolis, Minnesota

We've gotten at least three or four letters asking for how-to on small-scale philanthropy (see "Tithing Successfully," this issue, page 57). We're working on researching it: anyone else with experience or ideas, please write Joe Kane at **CQ**.

—Art Kleiner

Decentralized philanthropy

I've thoroughly enjoyed the last few issues, especially the Fall 1982 issue. "The Gift Must Always Move" was a fine article. It inspired an action which might be a potential strategy for "Creative Philanthropy." I have a friend — conservative — who believes that giving something to another person weakens that other person's moral character. She also puts far too much emotional significance on money. So I gave her $225 with the stipulations that none of the money could be saved or spent on herself or me, that the money can't be given simply as cash to another, that the money can't be given more than $50 at a time, and that the gift must somehow make the world a better place. So far she has bought two trees for our school and contracted with one of the students to pick up the trash in the school's neighborhood.

In a sense, it decentralizes philanthropy. Rather than philanthropists having to find a need for each dollar spent, they let others do it. More importantly, it allows others the experience of philanthropy — the experience of using money in a way not practiced by many. It also allows very efficient use of money. One person has a hard time accounting for many grants of $10,000 each. But grants of $250 spent in $50 parcels would probably be spent very efficiently. Just one idea you might wish to pass on in your next Creative Philanthropy course.

Paul Krapfel
Irvine, California

What else pocentric?

With respect to Jacqueline Ludel's article on language acquisition in chimps and dolphins (Fall '82 **CQ**), it is important to note that, until we succeed in becoming other than human, our perspective is *by definition* anthropocentric. If that is problematic, our only current alternative is suicide. Given this fact, it should not surprise us that all science is about "things that matter to humans." To whom else, pray, is science supposed to matter? We don't *do* things that don't matter to us, so it is pointless to ask science to adopt some other stance.

If a line of research is interesting, it should be followed. How else is science supposed to work? Need there be any justification for an experiment, other than sheer curiosity? Can there be, if the experiment is to be unbiased? Doesn't the history of science demonstrate rather compellingly that arguments against any line of research as useless or pernicious are useless, pernicious, and usually fallacious?

Finally, communication between humans and other species is always partly human in form. I talk to my cat in English. He talks to me in Feline. The fact that he understands me, and I him, means that the communication is also partly feline in form. If we are to communicate at all, he must learn some English, and I some Feline. Teaching other apes ASL is just an extension of that process of mutual accomodation. We can be sure Penny Patterson learned a lot of Gorillese from Koko.

Kristor Lawson
San Francisco, California

A dolphin researcher's thank you

Dear Professor Ludel,

Thanks for a "right on" essay on language acquisition. You put the matter of human fascination with human place and capability well and eloquently in its proper perspective, it seems to me.

I've been involved in dolphin study for about 30 years now and have felt (rather than posed) many of the same disquiets that you pin down. The real reason the field is so electric is that it refers to us, challenges our theological presuppositions about ourselves, and threatens to place us with the other animals. Like you I can hardly wait for it to succeed so we can stop being so damned arrogant about ourselves and our place. It would be nice to be just one of the other animals, which was the power of the Indian cultural views of the world. There is something equalitarian about propitiating a whale for its permission to kill it before doing so, as the Eskimos did.

In my lab we've been making some dents in wild dolphin communication systems and find that they probably organize their schools by phatic signal systems of whistles in a manner not much different from African wild dogs. . . .

My best, and thanks for a wise essay. I'll use it.

Ken Norris
Professor of Natural History
Santa Cruz, California

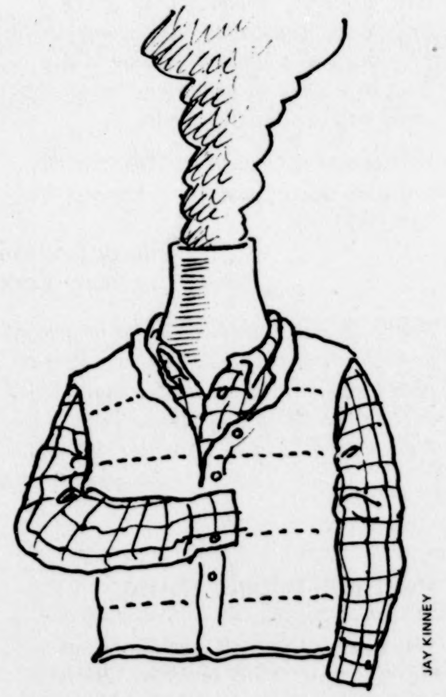
Life training

Your latest issue (Winter '82) is great. I thoroughly enjoyed it, and would like to comment briefly on Joe Kane's little blurb on the National Outdoor Leadership School (NOLS). You cannot make a direct comparison between Outward Bound and NOLS.

Mr. Kane boils it down to a choice between a lesson in self-command or harmony. It's not that simple. NOLS teaches wilderness survival skills, while Outward Bound uses the wilderness to help teach skills such as self-confidence, self-reliance, teamwork, and a willingness to accept, live, and work with new people. NOLS teaches wonderful wilderness skills, Outward Bound teaches skills which can be incorporated into daily life, wherever you live and whatever you do.

Outward Bound is more than adventure training; it is life training. It doesn't always work, but it can. I know, I have watched it at its best and worst.

David Koebel
former Outward Bound
instructor and student
Wellfleet, Massachusetts



Nuclear Bean's again

I am really surprised that you people fell for L.L. Bean's front man's statement ("L.L. Bean's nuclear change of heart," **CQ** Winter '82). I worked for them for three years, and also for Friends of the Earth here in Maine. It is true that Leon Gorman is an advisor to the Natural Resources Council (we call them the Neutral Resources Council). He is also on the board of directors of Central Maine Power. During the referendum to close the nuclear plant, the various organization members of the NRC got together to vote on a stand on the referendum. The NRC leader was heavily supporting a neutral stance. We voted to close the plant — Gorman then called both the NRC and Maine Audubon and said that L.L. Bean would end financial contributions to the organizations if they supported closing the nuclear facility. The NRC had their lawyer contact all of us who voted, explain the situation, and ask us to vote again. We again voted to close the plant. Maine Audubon remained neutral, as expected. And here we have Kilt Andrew bragging about money to Maine Audubon. During the second referendum neither of these groups *actively* supported anything. Such a view is misinformed. Gorman is still a questionable figure. (Other interesting areas worth researching are the origins of L.L. Bean's products — the sheepskin bicycle seats come from South Africa, the deck shoes from Malaysia, the rubber boots from South Korea, etc. — we were selling windbreakers from El Salvador until the bishop was assassinated, now they come from Macao.)

I feel it is dangerous and damaging to give support to L.L. Bean and their multinational corporate suppliers. Support small local outfitters, close the nuclear plants, and make neutral, "conservation" groups, who are afraid to take stands because of fund-raising potentials, unnecessary.

Sorry for the outburst, but Gorman does not deserve *any* good publicity, and Kilt Andrew is his publicity expert. Please remember who is telling you about Leon — Leon signs Kilt's check.

Gary Lawless
Brunswick, Maine

How not to commit suicide

Dear Art,

I have been thinking that we are only rarely aware of the far-reaching effects we have on the lives of strangers.

Your article on how not to kill yourself (**CQ** Summer '81) kept a friend of mine alive and let her live to learn that her manic depression is part of the deck she was dealt and is treatable — so that it seems that she will go on living now. It seemed to me that you should know about it.

In the bleakest month of her despair she found that issue of **CoEvolution** in the truck as we drove into Burlington. I winced and wished to God I had put it away. But you told the consequences of failed attempts in such a way that even at its bleakest life looked preferable. She was left with only the weaker ammunition against her life, which bodies with their fierce mindless grip on life assert themselves and reject.

So she is alive and she is all right.

Thank you for writing that brave, direct article.

If we do carry in us a thread of common consciousness, this must be it — the ever-crossing, expanding, and recrossing network by which you save the life of a stranger and then are somehow indirectly involved with every life she touches. It goes on and on. It's fragile and tenuous but it's all we have.

Sherry Fraser
West Brookfield, Massachusetts

Dear Ubiquitous

Thought you might be interested (my heart certainly warmed to biochemistry when I found this): There is a certain enzyme involved in the electron transport chain of oxidative phosphorylaxon called coenzyme Q or Co Q (obviously Co E Q would also work), and which is also called "ubiquinone" because it's so ubiquitous in biological systems. Since the thing I value most about **CoEvolution Q** is its wide-ranging eclectic interest in both the ubiquitous and the rare things in the world (and because I think it should be ubiquitous in people's homes and libraries), I found this to be appropriate.

Unsigned
(from reader survey)

Pornographic only if graphic

Regarding the issue of censorship and dividing yourself into two publications. . . .

The **Berkeley Barb** used to mix sex ads and radical politics, which was a way of running the whorehouse to pay for the hospital. They split into two papers at the behest of enlightened radicals, the radical rag died, and the sex paper survived and thrives. Granted, this is not a direct analogy with **CQ**, but it does point up that living with a moral muddle is preferable to being cleanly dissected, post mortem.

Regarding the art of compromise, you might find our **Open Education Exchange's** publishing experience useful. We found that we could say in print just about anything we wanted. But cartoons and pictures can truly offend. Fundamentalist Christians once trashed our streetracks in Oakland because our cover was a solarized photograph of a longhaired man, perhaps considered gay or Manson-like. Explicit photos of a massage class led to subscription cancellations. No written controversies ever trigger such visceral responses. So if you *have* to censor, censor the picture and make your statement with with words.

One last point. Charge us whatever you have to to keep the publication going. Thank you for providing a magazine free of cigarette ads, corporate self-congratulations, and designer jean solicitations. These are the *real* obscenities.

Bart Brodsky
Open Education Exchange
Berkeley, California

Dear Bart,
Open Education Exchange *is a fine piece of work. I agree with you it is explicit graphics that most lead to trouble. Four-letter words have a fraction of the impact of four-letter pictures, and that would probably be the easier way for* **CQ** *to limp (or wimp) around the issue. But it's not the most interesting way.*

If "narrow-casting" is supposed to be good in cable TV, why must it be bad in magazines? I draw a different lesson than you do from the **Berkeley Barb** *demise. Unlike our fractionally different* **CQ** *Lite and* **CQ** *Bold, the* **Barb** *and the* **Spectator** *became completely different publications, with appropriately different fates. The failure at the* **Barb** *may have been more in the readership than in the management. The whorehouse really did support the hospital. Enlightened radical theory said that should not be. So long as radicals of any stamp persist in honoring theory more than facts they will continue to righteously dismantle their successes. Delancey Street's John Maher said it: Schools don't reflect realistic conditions. Businesses do."*

Chocolate and vanilla **CQ***'s is a business decision. If it works, theory will follow.*

—Stewart Brand

Default choice

Dear **CoEvolution Quarterly**,

This is a quiz. I want to make life hard for you. For good reasons or bad you have opted for a clean and dirty version of your magazine. Now when it comes time for me to renew I find one of two boxes to check. Such ambiguity disturbs me. Does this mean you think I am an obscene reader? Do you think I might get off on articles by lesbian sadomasochists? Do you think I just like them thar tool catalog books glowingly reviewed by J. Baldwin? I mean, really, what *kind* of reader do you think I *am*, anyway?

Mind your own business.

I *want* your magazine, and I'll continue to subscribe to it, but I think this schizophrenia is a little, well, *insulting*. If you can't decide between being **Homesteader's Organic Plowing Journal** or **Lezzies in Leather**, how the heck do you expect me to decide? That's an unfair burden to place on someone who's slipping you a little cash, buckeroos. I, for one, am not going to be a party to your indecisiveness.

Enclosed is a check for renewal of two years of **CQ**. I'm not saying I prefer "Lite" and I'm not saying I prefer "Dark." Or, as my freshman English teacher put it, "I ain't a-saying yes and I ain't a-saying no, I jes ain't a-saying." You have some choices. You can tell me that I *must* check one box or another, in which case I'll probably say, no, I'm sorry, that really *is* none of your business and cancel my subscription. Or, you can decide for me and risk insulting me. Or you can . . . well, you're the folks with all the alternative ideas. I'm just a loyal subscriber. Why make life hard on a friend? Here's a check and here's a request for renewal. You figure it out.

Michael A. Armstrong
Anchorage, Alaska

The "default" choice is **Bold.** *(Reason: it has more, hence a better deal for the customer. The principle is, "When you're damned if you do and damned if you don't, do.")*

—Stewart Brand

More wicked, not less

. . . In the current **CQ** you ask about a raunchier version of the magazine. I'd be all for it — I thought the trouble with the S&M piece, for instance, was that it was mealy mouthed. I'd have been interested in some "how to do it" stuff. But there — I'm just a degenerate Limey.

Peter Laurie
London, England

Another warning shot

I will not renew my subscription. Since 1979 I have read many of the articles in your magazine, not because I agree with your general views, in fact I think that your approach is too naive, but because I wanted to know what is going on in SF plus suburbs. I have not forgotten that Berkeley has been the starting point of an important movement.

I do not think anymore that your magazine can provide the information I need. The introduction of **CQ** Lite and **CQ** Dark (why dark) gives clear evidence that you are victims of self-censorship, which I am afraid to say will also affect the — *horribile dictu* — dark version of your product. It may have been my mistake to have paid attention to your publication at all.

Kind regards
A. Flückiger
Bern, Switzerland

About ten subscribers have canceled or promised not to renew over the two-issue issue. —Stewart Brand

The first principle

I loved the "Sexual Devolution" article (about **CQ Bold/Lite**) in the **Village Voice, December '82.** I'm one Tantric Cowgirl here in the Big Apple that thinks your idea of having twins, "One that fucks, the other doesn't," is wonderfully amusing. I also think it is a brilliant move to test the sexual marketplace and get some needed publicity to increase your circulation. I love **CQ.**

As a pro-sex feminist, I still believe people who do not like sex have their rights too. Your "Lite" and "Bold" issues will give everyone a choice. I find it fascinating that people who want sex to be part of **CQ** object to your also printing an issue that is sexless. I would hate to think the anti-porn movement has us so nervous that we become like the people who oppose, insisting that there is only one "right way" to do anything. Freedom of personal choice is the first principle of pleasure. Send me your orgasmic Bold Twin.

Selflove and Orgasms (The title of my new book, which hit the market Jan. '83!),

Betty Dodson
New York, New York

Betty Dodson drew the highly graphic highly controversial illustration of two ladies enjoying zero gravity together for "The Day They Tested the Rec Room" in the Summer '81 **CQ.**

—Stewart Brand

Perf the whole thing

I hope it is not too late for suggestions in the "Mild vs. Wild" debate about one vs. two issues of your wonderful mag.

My suggestion is this: perforate all the pages, right in by the binding, like postage stamps. Then print only one issue with everything in it, as you have been. When subscribers see something they don't like, they can tear it out and throw it away, burn it, stomp on it, pour acid over the offending pages, or do whatever else is therapeutic/ cathartic for them. I envision readers alarmedly saying, as they rip, "My goodness, this *is* shocking isn't it?" or yelling "This is shit, I hate this kind of crap!" Good kindling for book-burnings??

By being able to readily separate articles without destroying the integrity of the remainder of the magazine, each subscriber makes a personal decision about what to *keep* of the magazine, since they could also tear out stuff they simply were't interested in. The row of little holes down the page could make getting an issue a much more *participatory* experience, and it ought to cost a lot less than printing and distributing two separate issues.

Another benefit is that it'd be easy to send articles or pages to friends (if you want to let them out of your own hands) — tear out and pass 'em along. Also, after a number of issues had been published in this way, you could begin to reassemble them into your own personal organization. They could go into your own filing system intact, or you could make up anthologies of all the Soft Tech articles or of some other theme you wanted to sort for.

And then, someone could invent and market, presumably through **CQ**, a little spiked wheel for perforating existing back issues that are unperforated!

Robert Castle Gay
Seattle, Washington

Sold

. . .Thank you for sharing my name with the Animal Town Game Company (**NWEC** p. 555). They are a rare find, especially at the gifting time of year. If selling your mailing list means getting turned on to people like them, sell on.

Joanie Poole
Sunland, California

Stay the hands of the hand-stayers

It is obvious to me that John Newmeyer's "Notes on a Method to Stay the Hand of the Torturer" (**CQ** Winter '82) represents a wish list which indicates the depth of his anger at torturers. But I object strongly to his last proposal in which relatives are held responsible for the crimes of another family member. This is vindictive and mean-spirited.

In our own constitution, punishment for treason was limited to the guilty party, exclusive of family. This was done, in part, to limit the extent of revenge-taking by various violent factions.

I consider this policy of our ancestors to be a precious piece of wisdom that should also be applied in the struggle against governmental terrorism. If this policy could be adhered to when an oppressive regime is overthrown, despite the release of long-suppressed anger, then the healing process of amicable relations could begin sooner within a society. The unsuccessful aspect of this proposal is that it is so rarely attempted.

Bruce England
Sunnyvale, California

I *love* it when readers keep us honest!

Your first try at Unclassifieds in the Winter '82 **CQ** was a great disappointment. . . . You have allowed yourselves to show rather monstrous favoritism toward your regular **CQ** staffers. Not only do Anne Herbert and Kathleen O'Neill get a photo plug for their new T-shirt business on page 143 (I thought you didn't have advertising in **CQ**!), but they are also given the first three spots in your Unclassifieds. Shame! Meanwhile, poor Conn Nugent, who did such a lovely job of guest editing "When Things Go Wrong," is given his unclassified far back down the line. All your protests about **CQ** serving your readers begin to sound rather questionable in such a light.

It's wonderful that you have such freedom in publishing your own magazine; it's even more wonderful when you exercise such freedom with restraint and fairness.

Laura Cohen
Albany, New York

Valid complaint. Malpractice corrected. —Stewart Brand

Failure feedback

Dear **CQ**, Conn Nugent and especially J. Baldwin ("Born to Fail," Winter '82 **CQ**):

. . . The real problem is not do we fail, but do we have the guts and the resources *to learn from the failures*?

Once upon a time I was a professional draftsman. How hard it is to get across to brand-new-from-school tyros that (in the beginning) the real purpose of a drawing is to have something *to change from*! They have been molded into the ego-trip of "Migawd, isn't it beautiful!" as they examine their "art." And then an engineer comes by, pencil in hand, scribbles all over it — and leaves the kid in near tears. . . .

Bob Barns
Davis, California

Tie

Earthscan — Press Briefing Document No. 32 — May 1982:

Xavante Indian leaders from Brazil's rain forests go to the capital to lobby their cause. . . .

One Xavante leader who was refused entrance to a government office because he was not wearing a conventional suit and tie, announced that Brazilian officials visiting Xavante villages would be required to wear penis sheaths, feathers and body paint.

Oregon Oikos
(No address)

margot models
the latest in metered
clothing

Sun belt economics

We Vermont readers of **CQ** try to be understanding. Your magazine is put together in California, and it must not be very easy to live there. The way I understand it no one can afford the land even for summer vegetables, much less potatoes, and I just don't know where you cut your wood. When Stewart writes something silly — like when he recommends $57 shirts that wear out in two years — we should remember where he lives. Maybe it's the weather.

But I have to write you about J.M. Gaffney's recommendation of the French Creek Sheep and Wool Company (Winter '82 **CQ**): "For one of their fine coats you can expect to spend from $350 to $1600, with most falling in the $725 range. A lot of money for a coat, but it will last 30 years." One of these $725 coats therefore costs $24 a year. For that much money I can buy a new $48 coat every other year, or a new $72 coat every three years; and each time I buy a new one, my old coat will still be in good enough shape to be worth giving to someone who can't afford a coat at all.

Although Mr. Gaffney's economics don't make any sense, the more important point to ponder is that made by Wes Jackson in the same issue: "We all want to do something to satiate *desire* which in most cases goes far beyond need."

Martin Holladay
Sheffield, Vermont

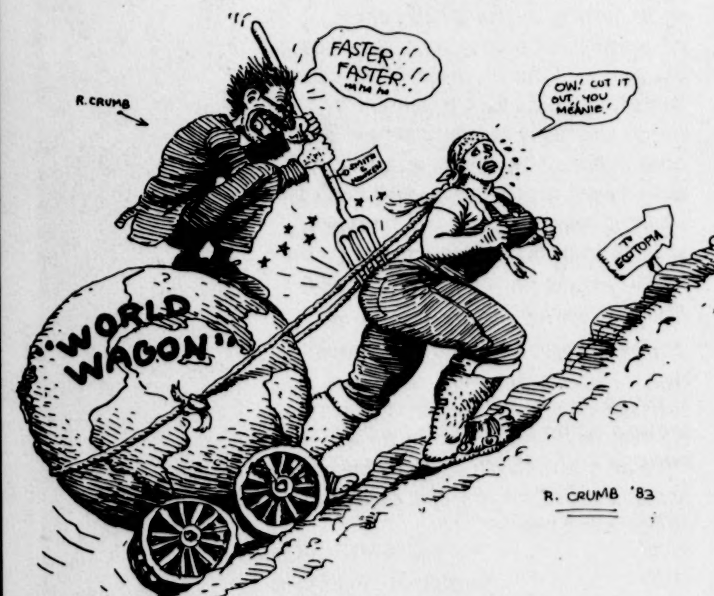
The abuse of old forms

Reading your Winter, 1982, issue I had the distinct impression that you, or at least Stewart Brand, are giving up the good fight. Not only did I read that you had decided to print two editions, one sanitized of anything sexual; but also I discovered an ode to of all things the *form* called marriage, "Poetry and Marriage: The Use of Old Forms" by Wendell Berry. It is no wonder you have circulation problems. Not only do you not promote your magazine; you also appear to have sold out to the puritans. Maybe you should begin 1983 by promoting **CQ** on the Moral Majority's mailing lists.

How can any magazine allegedly involved in transforming the world into one that includes and works for everyone no longer insist on human sexuality being openly and honestly discussed within its pages? If you want to increase circulation, why don't you try by promoting your existence to people who might be interested in a transformed world? But then you'd have to give up your opposition to marketing, obviously a more sacred cow.

Anyone who knows anything about human sexual relationships also knows that marriages can be wonderful. And that it stays that way partly because the participants give their word. Observers and participants also know that the form called marriage can become a living death for some of its participants. Staying in that form for the sake of the form with "faith" as the justification for doing so is about as self-actualizing or enlightened as dumping toxic chemicals into the Love Canal.

David B. Goodstein
President
The Advocate
San Mateo, California



Quality Crumb

It has occurred to me to wonder whether you have a sick need for punishment. Looking, for example, at the latest Robert Crumb cartoon ("Trash," Fall '82 **CQ**): I'm not saying it's not true; the picture of the big-money boys lining up to gang-rape poor Gaia is not hyperbole. But that's not the point. Nor is what's wrong with Crumb's piece that it's vulgar or shocking (that's irrelevant, and anyway I bet most of your readers have cut their teeth on **NatLamp** and are therefore immune to practically anything). No — it's that it's pure, unalloyed *negativism*.

Think abour your constituency: People who read **CQ** are types who hop out of bed an hour early in the morning, so that we can shoulder our Smith & Hawken pitchforks and rush out to our organic gardens to get in some double-digging before breakfast. Or we slip into our bandannas and Birkenstocks and trudge three miles to the nearest co-op to bring back bulk soybeans in a canvas shopping bag. Do *these* people need to have their noses rubbed in what's wrong with our high-consumption society? Hell, no! We *know* that stuff *already*. We're already walking around with permanent worry-headaches, just from reading the news.

And that nasty shot about recycling programs. Below the belt! I picture all of us eco-freaks patiently pulling the world-wagon, moving pretty well considering the steepness of the uphill slope, and *there's Crumb*, sitting up on the wagon, cracking the whip and hollering, "Faster! Faster!" Now if Crumb really wants action, why doesn't he get his ass going and *help pull*? Namely, why not take that eye-popping gut-wrenching technique and use it in a constructive, positive manner? Of course, cartoons showing squadrons of ladies coaxing Safeway officials into providing bulk, bring-your-own-container staples, or kids putting up "Don't Waste" posters in school hallways wouldn't be nearly as exciting as rape scenes. But then, we're into quality, not plastic hype. Right? Right, Stewart? Right, Crumb? Right?

Susie Pierce
Hayward, California

Stewart:
Thought you might be amused by this drawing which I sent to Susie Pierce as a reply to her letter concerning my work. I found her letter to be very inspirational! Just my meat!!
—R. Crumb

The Ozymandias of Oklahoma City

In his conversation with Stewart Brand ("Dow 2000 or Credit Collapse, Maybe Both," Winter 1982 **CQ**), Paul Hawken did one of those slipped decimal exercises that tend to drive business people absolutely nuts. As you have probably been told at least 27 times by now, the Penn Square Bank in my birthplace of Okie City was never a multibillion dollar bank. It ended at around $525 million in assets, which would have made it only third-largest in Albuquerque. The billions come in when considering the value of the loans brokered by Penn Square to various big banks around the country. These came to about $2.5 billion, according to **Fortune** magazine.

Penn Square left another monument to itself. Driving out of Oklahoma City last June I saw the skeleton of their new headquarters cutting into the sky. They must be doing big things, I thought at the time. Work on the building stopped the next month when the bank closed and I understand that the steel is still there, providing only a slight obstacle to the cold Oklahoma wind.

Harold Morgan
Assistant Cashier
Albuquerque National Bank
Albuquerque, New Mexico

Goodbye Thor, hello Quetzalcoatl

The American Viking story (**CQ** Summer '82) was interesting as much for what it reveals by the left-out parts as for its thesis. Example: Hispanics. All of America that is not white, black, or Amerindian is really mostly Mexican. This is quite a chunk. The American cowboy code is a Mexican heritage, not only culturally but legally. When the territory of California formed its first legislature in 1858, it canceled all of the laws which had been enacted by the Mexicans, with one very important exception: the Mesta, or the laws relating to the range and animal husbandry. The costume of the cowboy and his very way of being is essentially Mexican. It is my opinion that the so-called Viking culture is almost fully played out, exhausting itself on its own aggressiveness in the form of the arms race. It does not seem to be replacing itself with new little Vikings, strangely passive, often schizoid, mastubatory and frail. This could change, but we are going to have a lot of depressed old war babies to deal with before it does (or while it does). Mestizo culture, on the other hand, is flourishing. The American agricultural system, especially in the Southwest, could not function without wetbacks. Have you ever noticed how much of the *work* in California is done by people with Spanish surnames?

Jules Siegel
Oaxaca, Mexico

Anthropology of rebellion

As an anthropologist, I must admit embarassment at Polly Harrison's apparent lack of sensitivity to social context in her article on the misery of peasant women in rural El Salvador

("Mothers in Distress," **CQ** Winter '82). She frames the issue in the abstract terms of whether to conceive of peasant life, with Hobbes, as "nasty, brutish, and short," or, with Rousseau, as noble, idyllic, and peacefully satisfying. Her analysis of the women's highly elaborated way of talking about trouble, illness and their bodies seems to leave her siding with Hobbes, and that's the end of it. What might not have been fully apparent during her fieldwork in 1976, but which should have received much more attention in an article published in 1982, was that the locale she describes is in *northeastern El Salvador*. Not only did Dr. Harrison choose an extreme example of peasant misery, but one where in recent years the peasants themselves have decided, against Hobbes, that if there is misery there must be a reason for it, and a reason about which something can be done. I'm referring to the fact that northeastern El Salvador is today the stronghold of the peasant freedom fighters who are trying to break the yoke of the exploitative regime in San Salvador.

With this in mind I would suggest that if Harrison could (safely somehow) restudy this community, she would find a whole new way of talking about misery, or (to borrow a phrase from C. Wright Mills) a whole new "vocabulary of motives" in vogue among the women. The misery may persist, but not because peasant life is inevitably nasty, brutish, and short; and the language of physical affliction which was its medium of expression has very likely been supplanted, or (certainly) at least supplemented by a language of rebellion from oppression.

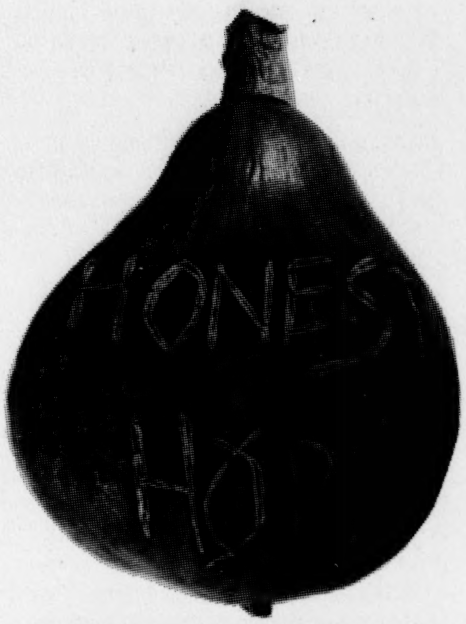
Tom Chordas
Hillsborough, North Carolina

AAAHHH!

It suddenly came to me today that the word for the spirit of the universe or whatever you want to call "It" has the sound "aahhh" in many many languages. To wit: God, Jah, Ra, Allah, Brahma, Atman, Yahweh, Ram, Baal, Ahura Mazda (I'm using the Thesaurus), Og, Hachiman, Mab, nagual, mana, wakan, huaca. . . . I think it's because the "aahhh" sound is so relaxing of the jaw and throat, letting go, giving in to what is. Makes me reminded of the oneness of all us folks.

Larry Ephron
Berkeley, California

Not to mention "Wakan Tonka" ("Great Mystery" – Sioux), "Buddha," and other examples and exceptions that readers might recall.
—Stewart Brand



Binda Coleman of Washington state noticed her young squash coming out at about the time she read "Honest Hope" in the Fall CQ. She was feeling the need for a little hope right then, so she inscribed the little squash and sure enough, several months later, they were interesting looking big squash (bluestones from Johnny's Selected Seeds) and she was kind enough to send me one. It has inspired a lot of plans in the office for decorating next year's pumpkins and squash.
—Anne Herbert

Announcing a CoEvolution Section on 'POLITICS & RELIGION'

Politics and Religion – the social expressions of our outer and inner lives – remain eternal hot potatoes. Bring up either topic at a mixed gathering, so the old saying goes, and watch the party degenerate into a heated argument. Mix the two together and – voila! – you get the Moral Majority, Jonestown, and the Moonies . . . or so it seems at first glance.

Yet, honesty demands that we give the devil his due (so to speak) and admit that Gandhi or Martin Luther King have shown that spiritualized politics can change things for the better. The growth of the present peace movement is due in no small part to the strong commitment of various religious groups who have managed to dwarf the sectarian left in their ability to reach large segments of the population.

The paradoxes here are daunting. If the moral conviction that leads anti-war Catholic Workers to repeatedly risk prison is admirable, what are we to make of that same moral conviction fueling others to attack Planned Parenthood clinics? Both the right and the left in Latin America can quote the Bible in defense of their political actions – and the Bible, in its inscrutable wisdom, is happy to oblige.

No matter where we turn – Guatemala, No. Ireland, the Middle East – Religion and Politics seem increasingly intertwined. Even if we reject both outright (a gesture of moral purism itself) they are bound to dog our heels until we take a second look.

There are no easy answers here but the time is long overdue to at least ask a few questions. With this in mind CQ *is sponsoring a section in its Fall, 1983 issue on "Politics and Religion." (Politics here includes electoral, radical, women's, civil rights, as well as local and bioregional varieties. Religion encompasses not only organized denominations, but small groups, unorthodox, and individual paths too.) Readers who have successfully combined the two (or gone down in flames, but lived to tell the tale) are invited to send in their observations, conclusions, and enlightening anecdotes regarding the whole controversial mess. We'll also be soliciting contributions from a number of public figures who have actively meshed their political and religious lives, so space will be at a premium. Not everyone, obviously, will make it into print but if you keep it short and to the point, your chances improve greatly.* **Deadline for letters is June 10, 1983.** *As usual, printed letters will be paid for, though no letters – whether printed or not – can be returned.*

A personal aside: The idea for this section came out of my own preoccupations and conflicts. Six years of fairly intensive political focus left me creatively dried-up and politically cynical. In re-exploring my assumptions about life I reopened long-deferred questions about God, Meaning, and other intangibles. This proved sometimes excruciating, sometimes amazing, but always necessary. It remains ongoing . . . . Trying to put my spiritual interests into a working relationship with my political ideals led to my discovering Thomas Merton and Simone Weil among others. And as voices of the past have pointed to the present, I have a hunch that I'm not alone in puzzling this out. How about you?
—Jay Kinney

GUSTAVE DORÉ, ADVENTURE OF BARON MUNCHHAUSEN DURING HIS IMPRISONMENT BY THE TURKS

COEVOLUTION

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Gossip

The alert reader may be wondering why Ursula LeGuin is on the cover and not in the table of contents or anywhere else visible in the issue. It's because she's cleverly disguised as G. West, President of the Association of Therolinguistics, whose **Journal** *appears on p. 30. The story "The Author of the Acacia Seeds" appears in her wonderful new collection of stories,* **The Compass Rose** *(1982, 273 pp., $16.45 postpaid from Harper & Row, Keystone Industrial Park, Scranton, PA 18512). The sex of President West is still undetermined; in fact we're not even sure of its species. But its invitation to contribute further therolinguistic studies to the* **Journal** *is sincere, and Ms. LeGuin will assist in jurying the submissions.*

All of our mothers have been calling the last few weeks to find out if we were being swept away by California's unusual storms and tides this winter. Indeed, the Pacific Ocean did sneak in through the volleyball court drain one production morning, but heroic shoveling by Don, David, and Kathleen made a successful levee at the back door. Highest tides in memory around here.

Mainly this season will be remembered as the Winter of the Computer at **CQ**. *After putting over 200,000 miles on our second IBM Selectric Composer and growing tired of incessant breakdowns, we finally are making the big conversion to computer typesetting. The choice came down to an AM Varityper, an Itek 1400, or a Compugraphic MCS 8204 (computer buying involves a LOT of hardware gossip and technical nitpicking). We got the Compugraphic. It has a telecommunications capability, so now we are a type house. You can send your typesetting over the phone from your computer to ours, and at $35/hour we'll set it (also type spec, layout, etc.). We have 28 type faces, ranging from five point to 36 point (this right here is eight point), and disk storage if you please. Fully staffed with two typesetters — the excellent Kara Adanalian and the excellent Deborah Hamilton, who are also taking non-telecommunications typesetting work — this business should carry us beyond the $730/month equipment lease and make another much-needed income source.*

Then Art Kleiner and I got ours. Ten years ago I wrote enthusiastically about computers in **Two Cybernetic Frontiers** *and haven't touched one since. Art has become Joe Computer Consultant, but what he used was only slightly more complicated than an electric toaster, and its output was*

"Or Whole Earth Bookstore"

That phrase under access information in the **CoEvolution Quarterly** means you can mail order the item from the Whole Earth Bookstore, operated by the San Francisco Zen Center. *Do not send orders for books reviewed in* **CQ** *or the* **Whole Earth Catalog** *to* **CoEvolution Quarterly**; *we sell only our own products.* Send your mail order book orders to:

Whole Earth Bookstore
Fort Mason Center
San Francisco, CA 94123

All orders: Add $1 for one book; $1.50 for 2-4 books; shipping free (bookpost) with 5 or more books per order.

Rush orders U.P.S. (Continental U.S.): 40 cents additional charge per book.

Foreign orders (surface mail): 50 cents additional postage per book past the first two. International Registry Insurance (add $3.50 per order) is recommended. Payment only in U.S. funds drawn on a U.S. bank.

California delivery: Add 6% tax (BART counties 6½%).

VISA/MasterCard orders accepted.

Telephone (415) 441-7250.

Two new offers to CQ subscribers

On our reader survey this winter we asked: "Where should we look for new subscribers?" Your most common replies were: among people our subscribers know, in libraries, on college campuses, and in community groups. We designed these two offers for you to help us reach people you know and libraries. If anyone has a good, inexpensive method for publicizing **CQ** *on college campuses or in community groups, please let us know about it.*

Offer 1: *If you send us up to three names and addresses of people who you think would enjoy this magazine, we will send each one a free back issue and a card naming you as their benefactor.*

Offer 2: *If you give a gift subscription to any library, public or private, that does not already receive* **CQ**, *we will add a free extra issue on to your own subscription. Please indicate clearly which of your gifts are to libraries.* **Note**: *this offer is only good if you send us your mailing label!*

Both experimental offers expire September 21, 1983. —Art Kleiner

Typesetter Kara Adanalian at the keyboard and screen of our new Compugraphic MCS. Below her feet is the controller — the system's brain.

about equally readable. Suddenly in January I was invited to be "faculty" for a computer conference program called the School of Management and Strategic Studies, invented by the Western Behavioral Sciences Institute in La Jolla, California. The participants include senior business, academic, and government people who will be doing school from their offices through their computers for a two-year hitch. Besides the honor and the income and the company of people like Herman Kahn and climatologist Walter Orr Roberts and anthropologist Mary Douglas, I get the loan of a swell computer. "Whadjya get!?" A Kaypro II, plus Hayes Smartmodem and Gemini-10 printer. The Kaypro apparently is coming on strong as the best new portable personal computer, outclassing the Osborne, and a deal at $1800. Art Kleiner said they've become popular among people on his EIES Network (which also handles the program I'm in), so he bought a Kaypro himself. He's already computerized his Rolodex on it.

I'm impressed. By EIES, by computer conferencing, which I am reveling in, by the conferences I'm in, and by the Kaypro. Mind, it's like learning to drive in about 1924 with a Model T Ford, a big deal, and you get a flat tire every five miles, but it's adventurous. Word processing is technology I've been waiting half a lifetime for. When Art goes on the road the next few months to work on his magazine book, the Kaypro goes with him, and his contributions to **CQ** *will be typeset by him from afar by phone.*

So how's business? Well, the LITE and BOLD experiment is underway. So far 190 people have requested **CQ** *Lite versus 1900 requesting* **CQ** *Bold — 10 percent. A much larger number haven't indicated which they want, and they get Bold. There's been a surprising amount of national press (***Village Voice***, CBS News,* **California** *magazine). We won't know for a year if it'll pay off, but it certainly isn't breaking us, and it's interesting to try.*

Meanwhile the San Francisco **Chronicle** *column is going well, as is our mailing-list rental and "***CQ** *Unclassifieds." The people at Animal Town Game Company rented part of our list and say they got a 2.3 percent response right away, compared to .9 percent elsewhere. Most of the people who are testing our list (usually 5000 names at first) are satisfied enough to "roll out" the whole list subsequently. And one Francis Stanton, advertising "Travelers Maps" with us, writes: "My ad in* **CQ***'s Unclassifieds is doing better than any other magazines or newspapers, including* **Natural History** *and* **The Wall Street Journal***."*

Production Liaison Jonathan Evelegh is finally getting paid for what he loves to do, DJ dance music (African,

---

Thank you

Maniacal Subscribers ($1000)

Peter C. Akwai
Frankfurt am Main,
West Germany

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Inchture, Perthshire
Scotland

Bamboo Flying Water
New York, New York

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and 7 anons

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and one anonymouse

**by virtue of returning payment for article*

The Retaining Subscriber list includes only those who became retainers since the last issue, as of 2/11/83. Retaining Subscribers get your year's **CQ**s in an envelope, delivered first-class. Sustaining Subscribers get your year's **CQ**s in an envelope, airmail. Maniacal Subscribers get your **CQ**s in an envelope, airmail, for the rest of your life (or ours, whichever comes first). For all three, we gratefully publish your name and town in the magazine (unless you say not to). All contributions are tax-deductible because we're a non-profit foundation.

Caribbean, European, American) at Club 181 on Eddy Street in San Francisco. "The Club has a certain notoriety as a black transvestites' hang-out, but there's no need to be afraid as they're very friendly and there's not very many of them anyway (not enough to go around actually). We have a late-night license and so will be open after two a.m." Jonathan makes me feel I'm living LITE. —*Stewart Brand*

Next Whole Earth Catalog Access Update

"Reprint this book!" wrote Peter Warshall way back in the Winter 1976 **CQ.** *He was reviewing John Wesley Powell's* **Report on the Lands of the Arid Region of the United States,** *originally published in 1876, "the most beautiful environmental impact report ever written." Powell described the Colorado plateau and Southwest deserts and foresaw population boom and water mismanagement there. A facsimile of the 1879 edition is back in print for $11.45 postpaid from the Harvard Common Press, 535 Albany Street, Boston, MA 02118. Their neighbor the Boston Community School has a new 144-page edition of* **How to Do Leaflets, Newsletters and Newspapers** *(***NWEC** *p. 500), the best-done guide we've seen on its subject: $5.75 postpaid from the Mediaplace, 10 West Street, Boston, MA 02111.*

Kit Houses by Mail *(***NWEC** *1st Edition p. 232), "the best overall introduction to kit houses" according to J. Baldwin, is now revised and back in print for $10.50 postpaid from Hearst Books, 224 West 57th Street, New York, NY 10019 or Whole Earth Bookstore. The seminal book on military spending versus military effectiveness,* **The Price of Defense** *(***NWEC** *p. 381), is revised and updated in paperback under a new title,* **Winding Down,** *with a new foreword by* **Scientific American** *publisher Gerard Piel and an updated chart of U.S. Military costs since 1900. It's $7.95 postpaid from W.H. Freeman and Company, 660 Market Street, San Francisco, CA 94104 or Whole Earth Bookstore.*

One publication I've long despaired of finding easy access for is now available for $15 postpaid from Willamette Exporting, 7330 Southwest 86th Avenue, Portland, OR 97223. It's the **CeCoCo Guidebook** *from Japan, a catalog of cottage-industry-type tools, reviewed in '72 by Ken Kern and still listed in* **NWEC** *(p. 154). The well-designed* **Lineman's Gloves** *(***NWEC** *p. 158) were sold to a new manufacturer; they're $22 postpaid from The Perfect Leather Workglove, P.O. Box 292, Durham, NH 03824.*

That's pretty much all, except for new addresses for **Tilth** *(***CQ** *Winter 1981), 2270 N.W. Irving Street, Portland, OR 97210; for* **In These Times** *(***NWEC** *p. 389), 1300 West Belmont, Chicago, IL 60657; for* **World Paper** *(***NWEC** *p. 380), 44 Kilby Street, Boston, MA 02109; for* **American Indian Art Magazine** *(***NWEC** *p. 468), 7314 East Osborn Drive, Scottsdale, AZ 85251; and for the apocalyptic mail-order book house* **Loompanics** *(***NWEC** *p. 394), P.O. Box 1197, Port Townsend, WA 98368.* **Robotics Age** *(***NWEC** *p. 537) has not only a new address (P.O. Box 358, Peterborough, NH 03458) but a new editor, Carl Helmers, who used to edit* **Byte** *(***NWEC** *p. 530), which itself, in the migrations typical these days for computer magazines, is now owned by McGraw-Hill (but at the same address). . . .* —*Art Kleiner*

CoEvolution/POINT Financial Report
Winter 1982/83

INCOME	**Nov, Dec, Jan**	
Subscriptions, gifts & renewals	$ 98,902.62	
Distribution	15,617.43	
Back issues	9,629.70	
Retaining & sustaining	3,851.40	
CQ total	**$128,001.15**	
Other products (shirts, books, maps, NWEC)	33,730.19	
Unclassified ads	2,729.50	
Mailing list rentals	3,946.50	
Chronicle column	5,950.00	
Uncommon Courtesy	10,413.00	
Grand total	**$184,770.34**	
EXPENSES		
Printing (37,500 copies)	25,828.58	
Distribution shipping	1,117.03	
Subscription process & mailing	17,426.88	
Salaries		
Editorial	17,871.57	
Production	13,242.94	
Office	29,341.68	
Contributors	7,700.00	
Equipment rental & purchase	2,696.63	
Legal & Professional	1,035.37	
Office & production supply	4,619.21	
Postage	4,557.61	
Promotion & advertising	12,279.34	
Rent	6,178.00	
Telephone	2,355.22	
Utilities	1,012.02	
Misc. operating expenses	3,469.26	
CQ total	**$150,731.34**	**(net – $22,730.19)**
Other products	15,325.00	(net 18,405.19)
Unclassified ads	175.00	(net 2,554.50)
Mailing list rentals	691.96	(net 3,254.54)
Chronicle column	683.10	(net 5,266.90)
Uncommon Courtesy	9,610.03	(net 802.97)
Grand total	**$177,216.43**	
NET GAIN (OR LOSS)	**$ 7,553.91**	

POINT Financial Statement
31 January 1983

Assets	
Cash in bank	$ 11,317.64
Investments	39,189.71
Accounts receivable	
Distributors	27,149.09
Mailing list rentals	10,772.83
Chronicle column	NA
Inventory	
Back issues	$ 86,463.65
Other products	11,278.42
Random House inventory of **NWEC**	NA
Liabilities	
Accounts payable	$ -0-
Subscriber liability	296,132.00
Random House (negative **NWEC** sales)	NA

UNCLASSIFIEDS

The UNCLASSIFIEDS are a reader-to-reader service available to **CQ** subscribers only. They're designed to provide a cheap communications network for **CQ** readers and mild financial assistance to the magazine.

TO ADVERTISE:

You must be a current subscriber! Please send a recent mailing label from the cover of **CQ** when you send in your ad copy. You may become a subscriber when you place your ad (see below). The first few words in your ad will be in all capital letters. (We cannot do any other words all capitals — they take up twice the space.) Rates are 50 cents a word. You count them and send us payment with copy. We will not bill. Payment must accompany copy. Your address must be included in ad copy as we will not forward replies.

To run a repeat ad, multiply your ad payment times the number of issues you want the ad to run. Send in that amount and we will print the same ad that many times.

Deadlines are two months before publication date. The next deadline is April 21 for the Summer issue; then July 21 for the Fall issue. Sorry, we will not take ads over the phone. Ads received after the deadline will be held for the following issue.

We print ads in the order received. "UNCLASSIFIEDS" — no categories. **CQ** subscriptions rates are $14/year ($17/year foreign and Canada). Please add this amount to your payment if you are not currently a subscriber. Order forms for subscriptions are at the back of this magazine. Mail ad and payment (made out to **Co-Evolution Quarterly**) to **Annette LaBette, CQ UNCLASSIFIEDS, P.O. Box 428, Sausalito, CA 94966.**

BEER LOVERS. Make great American and European beers at home. All Natural No Additives. Save money. Complete Kits, Equipment and Supplies. Free Details: Duane Imports, Department COE, P.O. Box C-500, Hershey, PA 17033.

TAPES OF GREGORY BATESON: Several more cassette recordings are now available. Send long SASE with double postage for information. Dolphin Tapes, Hot Springs Lodge CQ83, Big Sur, CA 93920.

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"SUPPORT THE FRINGE, the edge is closer than you think." 100 percent cotton T-shirts in red, lt. blue, yellow, or tan. Words are incorporated into graphic adaptations of the woodcut. "The Vision of Ezekiel." S, M, L, XL. $6.50 postpaid. Amaris Enterprizes, P.O. Box 3253, Chapel Hill, NC 27514.

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NEW . . . FREE . . . SPRING CATALOG! Top real estate values coast to coast! Please specify type property and location desired. United Farm Agency, P.O. Box 291307-CV, Los Angeles, CA 90029. Ph. Toll-Free: 1-800-821-2599.

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SOFT SHOES. CUSTOM MADE to each of your feet in heavy, very soft supple leathers. They are resoleable for years of service, and are super comfortable. Boots too. From $75. For info: Softshoes, 2535 NE 13th, Portland, OR 97212.

FRIENDS/LOVERS — Discover "Contact High," the national magazine for New-Age singles. Details free (sample issue, $3). Box 500-CQ, Mendocino, CA 95460.

HOMEOPATHIC MEDICINE! Books, tapes, kits. For our complete catalog, SASE: Homeopathic Educational Services, 2124 Kittredge, Berkeley, CA 94704.

HELP WANTED: Individual, couple, family to assist with childcare, homesteading and domestic work at isolated seaside tropical site. Village Farm, Box 16, Punta Gorda, Belize.

EUCALYPTUS. Grow it for fast firewood crop. Many hardy varieties. Order now for spring 1983. Creekside Nursery, 2783 Guerneville Road, Santa Rosa, CA 95401.

TAKE YOUR TIME you will have more of it. We have been successfully invaded by an alien lifeform. We call them ideas. We earthlings must learn to cope with them. Think on think. When something happens to you that hurts try to immediately encapsulate the idea in your mind just before the hurt. Try to discard this idea each and everytime you think on it thereafter. It will weaken and eventually fade away allowing more beneficial ideas to pass through. Beneficial ideas tend to pass through our brains time and time again, while the ones that hurt tend to move in and stay. No human can lack freedom only want it. I am revolting.

SOLID OAK PORCH SWINGS & GLIDERS made by my Friend Penny Ambrose from Jeruselum, Arkansas. From $95 Ppd. we will guarantee these swings 10 years. For a brochure and picture write Arkansas Folkwares, 1135 S. 7th St., Dept. III, Ann Arbor, MI 48103. (313) 663-6992.

THE WHOLE HERB COMPANY, P.O. Box 1085, 250 E. Blithedale Ave., Mill Valley, CA 94941, wholesale only, $50 minimum, offers herbs and spices from one to 1000 pounds; also potpourri, essential oils and fragrance materials, gelatin capsules, tea blends, etc.

WE GROW PLEASURABLE THINGS FOR WOMEN. Send $2 for catalog. Eve's Garden, 119 West 57th St., New York, NY 10019.

COCOPELI STORIES. Tales of Cocopeli the Flute Man, Spider Old Woman, Bear, and Coyote; describing a world in which the Earth is alive and all living beings inter-related. For children as well as adults. Illustrated. $5 from Coyote Press, Box 101, Deadwood, OR 97430.

CHAR B. RICHE will discuss the philosophy of stable-steady economic reality — How to begin the process to a new age living system! —De-Centralizing Ourselves— Money isn't just cash! Barter — trade Rightlivelyhood — Voluntary simplicity. 1712 Victor Blvd., Arcata, CA or Box 255 Potter Valley 95469. (707) 442-3638.

THE GUIDE TO SOUTH AMERICA — overland! Customs, pleasures, hassles-explained. Detailed maps; bound, revised edition $2.50: Benecki, 510 20th St., Lawrenceville, IL 62439. Dealers: 10 copies — $1.85 each.

"SOLAR ENERGY DIGEST: it is full of news: accounts of new inventions the world over, new experiments, new developments. The enthusiasm of the editor shines through on every page." That's what one of the world's foremost solar innovators, William A. Shurcliff, thinks of SED. So, if you're interested in solar, it could be just what you've been looking for: a quickly read, enthusiastic, yet reliable and worldranging newsletter to keep you updated on all areas of solar energy. Monthly, established 1973, $35 year, sample copy $1. Solar Energy Digest, 74 West Palo Verde Ave., P.O. Box 88-CE, Ocotillo, CA 92259.

BED & BREAKFAST 3 miles from Pt. Reyes National Seashore. Passive solar home located on bluff overlooking acres of pastureland — hills of Inverness Ridge beyond. House furnished with family antiques, worn oriental rugs, original artwork. 100's of miles of hiking trails, pristine beaches, horsebackriding by arrangement. 3 rooms, $40 ea. Thirty-nine Cypress, Box 176, Pt. Reyes, CA 415-663-1709.

SEXY COUPLE ACTIVE AND ATTRACTIVE seek to cooperate in playful exploration of sailing and frontier living. Independent resources necessary. Ida Little, Ignace Airways, Ignace, Ontario, Canada P0T-1T0.

Family-type crisis sanctuary and center for handicapped (challenged) kids and adults. A place where people who need time, peace and quiet can stay for a while and get their heads straight. Rural, isolated. No fees. We live on individual donations and sale of craft items. Everything confidential. Write QH + BS, P.O. Box 114, Pyote, TX 79777.

HELP ME! Poet surviving on yogurt and canned chili. Can't hold on much longer. Please purchase my poem. Beautifully illustrated full color lithograph. Fits 8x10 frame. Gift for yourself or friend. "Warm, witty and wise," my mother says. Money-back guarantee. $5 to Ronald Ball, 6 Alondra, Irvine, CA 92714.

FAMILY TREE is a network of folks in New England interested in responsible non-monogamous and other alternative lifestyles. We have a monthly newsletter and meet from time to time for discussions, hikes, potlucks and just enjoying being together. Keith Davison, 239 Clinton, Brookline, MA 02146.

GROW GRAIN Amaranth! Two-six months, organic gardening apprenticeships offered, remote Ozark hills, single women, vegetarians, no dogs. Ricky Minton, Star Route, Kingston, AR 72742.

PHYSICIAN ASSISTANT, board-eligible, seeks exceptional physician with whom to practice. Speak Spanish. Contact: John Benecki, 510 20th St., Lawrenceville, IL 62439.

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"THE SUN tries to print the truth. Not the news or the latest, but the Truth, Mr. Truth, the Queen of All Our Dreams. And it does." That's CQ's Anne Herbert, reviewing The Sun, a Magazine of Ideas. Subscriptions are $20 a year (12 issues) from The Sun, 412 West Rosemary Street, Chapel Hill, NC 27514. Contributors include Ram Dass, Robert Bly, Hugh Prather,Patricia Sun, and many "unknowns" worth knowing.

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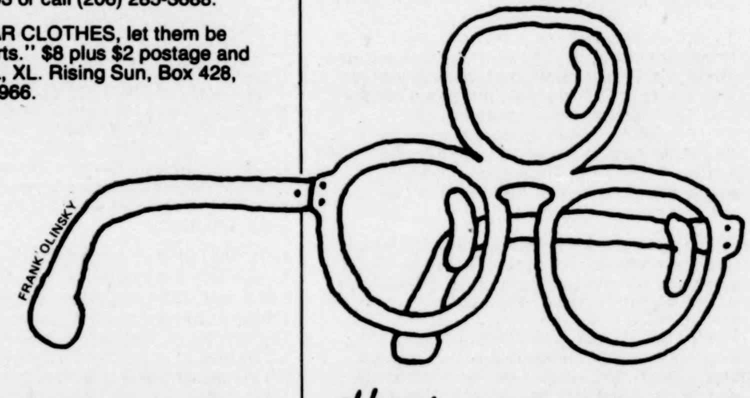

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NEWCOMER TO CHARLOTTESVILLE, VA. How do you meet people here? Are there any CQ readers in the area? RFD 4, Box 188A, 973-9796.

BOOT PROBLEMS? Questions? We're as close as your mailbox or phone. Our remote battery powered shop pleases feet nationwide. Portland drop-off centers at Oregon Mountain Community and R.E.I. Mountain Soles Custom Boots and Repair, Box 28, Troutlake, WA 98650 (509) 395-2884.

SOCIAL ECOLOGY SUMMER PROGRAM. July 15 thru August 5, 1983. The Institute for Social Ecology, formerly associated with Goddard College, is resuming its program in social ecology in conjunction with Burlington College, Burlington, Vermont. This program will focus on crucial issues of ecological breakdown and its relationship to social decay. The intensive 3-week residential summer program will explore five major areas for ecological and social reconstruction: ecological food production (agriculture and aquaculture), social theory, feminism and ecology, holistic health and nutrition, and alternative technology (solar energy, passive solar building design). 6 college credits. Distinguished faculty and speakers will include Murray Bookchin, Dana Meadows, Daniel Chodorkoff, Ynestra King, Dennis Meadows, Peter Barry Chowka, Grace Paley, John Richardson, Dave Dellinger, Samuel Kaymen, Stuart Hill, and others. For brochure and further information write: Box 89, Plainfield, CT 05667. Call Gloria (603) 675-2230.

FIVE WATERS FAMILY CAMP — A playful way for families to experience the joy of growing, living, and loving together. Activities include: creative children's camp, conscious relationship workshops, family games, singing, swimming, horseback riding, nature awareness, meditation. On a spectacular 200 acre rance on the New River, bordering the Trinity Alps Wilderness Area of Northern California. Staff includes family therapist, credentialed teachers, naturalists, R.N. June 26-July 3. 185 12th Street, Arcata, CA 95521. (707) 822-5697, 822-3410.

OUT OF PRINT BOOKS recommended in CQ — NWEC (and other sources) now being reprinted. If you send us a large SASE, the title, author, publisher, etc. for your requests, we'll send you a price quote and a book list. Our inventory increases according to your needs. Endangered Book Sanctuary 1309 Poppy, Long Beach, CA 90805.

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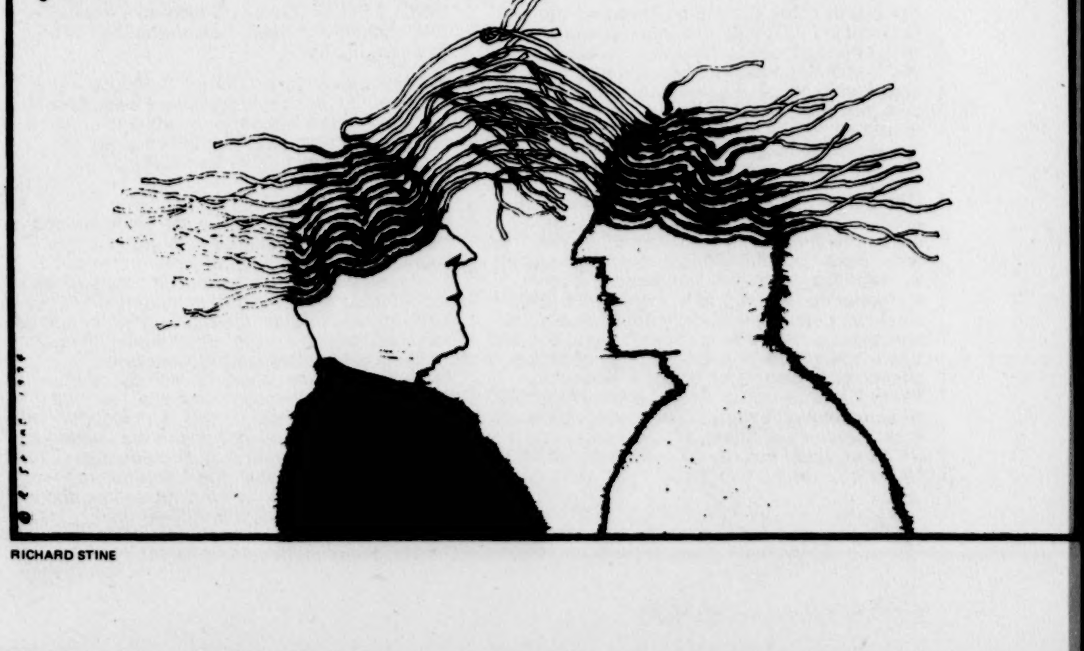

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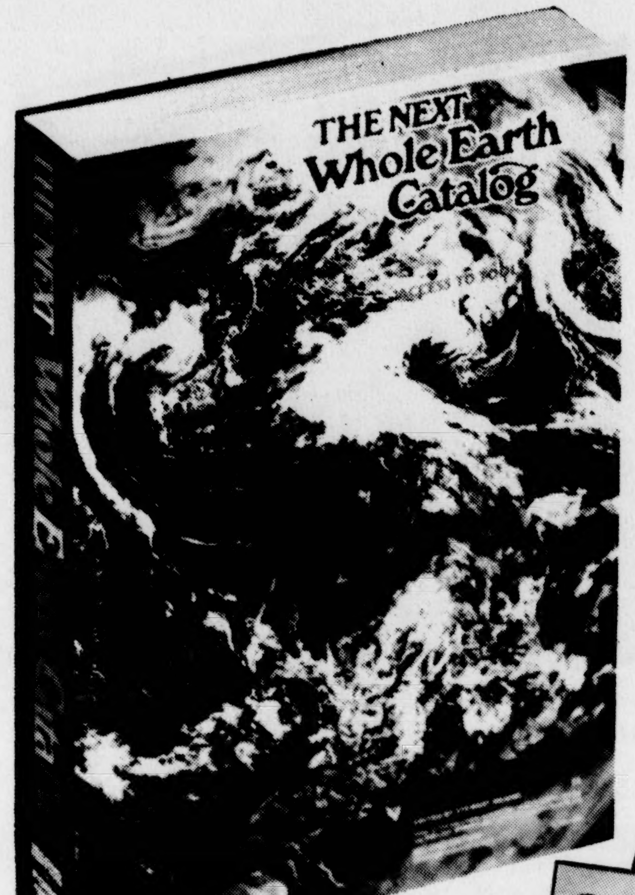

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COEVOLUTION
VERNACULAR GENDER by Ivan Illich Page 4

CoEvolution Quarterly

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No. 36, Winter 1982. "When Things Go Wrong," a guest-edited section featuring J. Baldwin on designing with failure, Wendell Berry on the use of forms in poetry and marriage, a riveting story of ocean misfortune, and an artist called Apology. Plus letters from Gregory Bateson, Stewart Brand interviewing Paul Hawken, and the transcript of the first Creative Philanthropy Conference.

No. 35, Fall 1982. Articles on "personal national peace-finding," rules of thumb, the native spirit of gift-giving, Gregory Bateson, raw and fanciful Texas talk, and an anti-space adventure.

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No. 34, Summer 1982. Donella Meadows on long-term global modeling, a doctrine of unarmed military service, Admiral Hyman G. Rickover's management philosophy, how and why to work in local politics, Michael Phillips on the persistence of Viking culture in America, Paul Hawken with good news and bad news on the economy.

No. 33, Spring 1982. Articles on the nature of gender in our time, including a major piece by Ivan Illich. Also: nonfiction melodrama by Will Baker, Anne Herbert's "Rising Sun Neighborhood Newsletter," "Redefining the Police," and a précis of Paul Hawken (et al.)'s book, **Seven Tomorrows.**

CoEvolution Sweatshirt

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WHAT'S HAPPENING to libraries lately is like they're shooting stars out of the sky. Libraries are such unnatural, incandescent miracles and it's so easy to take little chunks out of them, like nighttime hours when people stuck doing something they don't much like the rest of the day can spend a few hours checking out the rest of the universe. Emerson said that if the stars only shone once a century everyone would be out there in awe that whole night. Libraries to me are honest to God about that weird, but they're there all the time too, so chipping away at them doesn't seem much like amputating a unicorn but they are a wondrous beast.

—*Anne Herbert*

IN THE COMMUNITY regulated only by laws of demands and supply, but protected from open violence, the persons who become RICH are, generally speaking, industrious, resolute, proud, covetous, prompt, methodical, sensible, unimaginative, insensitive, and ignorant. The persons who remain POOR are the entirely foolish, the entirely wise, the idle, the reckless, the humble, the thoughtful, the dull, the imaginative, the sensitive, the well-informed, the improvident, the irregularly and impulsively wicked, the clumsy knave, the open thief, and the entirely merciful, just, and godly person.

—*John Ruskin, 1862*

THE only thing to teach is how to fall in love, what to do then to make it last. To make it a lifetime thing. To teach how to find out more about the beloved. To build something with the beloved, within the beloved. To teach all this before love ever happens so that when love comes, be it of caterpillars or dead painters or wood and nails or computers that talk back, the feeling doesn't dissipate into a hopeless infatuation—"it must be wonderful to do that, to know about that, but I can't"—but is a release of power like real love that leads to knowing more because you know where to find it, to cherishing and building in this love because you know that someone can tell you how to do it and you keep looking until you find the one who can.

—*Anne Herbert*

The Oak Beams of New College, Oxford

"New College, Oxford, is of rather late foundation, hence the name. It was probably founded around the late 16th century. It has, like other colleges, a great dining hall with big oak beams across the top, yes? These might be eighteen inches square, twenty feet long.

"Some five to ten years ago, so I am told, some busy entomologist went up into the roof of the dining hall with a penknife and poked at the beams and found that they were full of beetles. This was reported to the College Council, who met in some dismay, because where would they get beams of that caliber nowadays?

"One of the Junior Fellows stuck his neck out and suggested that there might be on College lands some oak. These colleges are endowed with pieces of land scattered across the country. So they called in the College Forester, who of course had not been near the college itself for some years, and asked him about oaks.

"And he pulled his forelock and said, 'Well sirs, we was wonderin' when you'd be askin'.'

"Upon further inquiry it was discovered that when the College was founded, a grove of oaks had been planted to replace the beams in the dining hall when they became beetly, because oak beams always become beetly in the end. This plan had been passed down from one Forester to the next for four hundred years. 'You don't cut them oaks. Them's for the College Hall.'

"A nice story. That's the way to run a culture."

—*Gregory Bateson*

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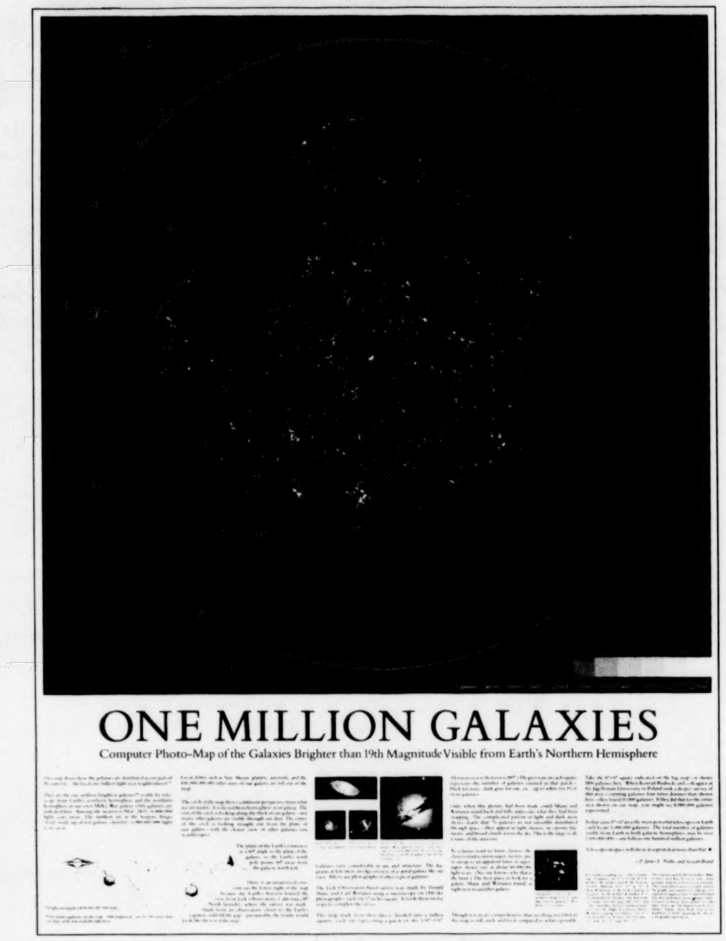
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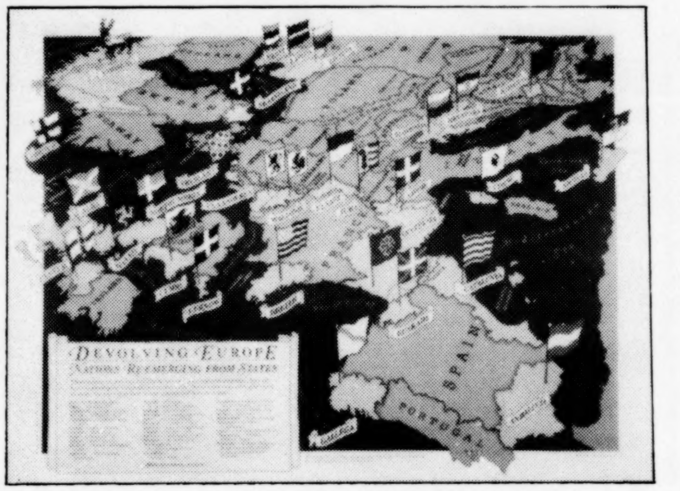
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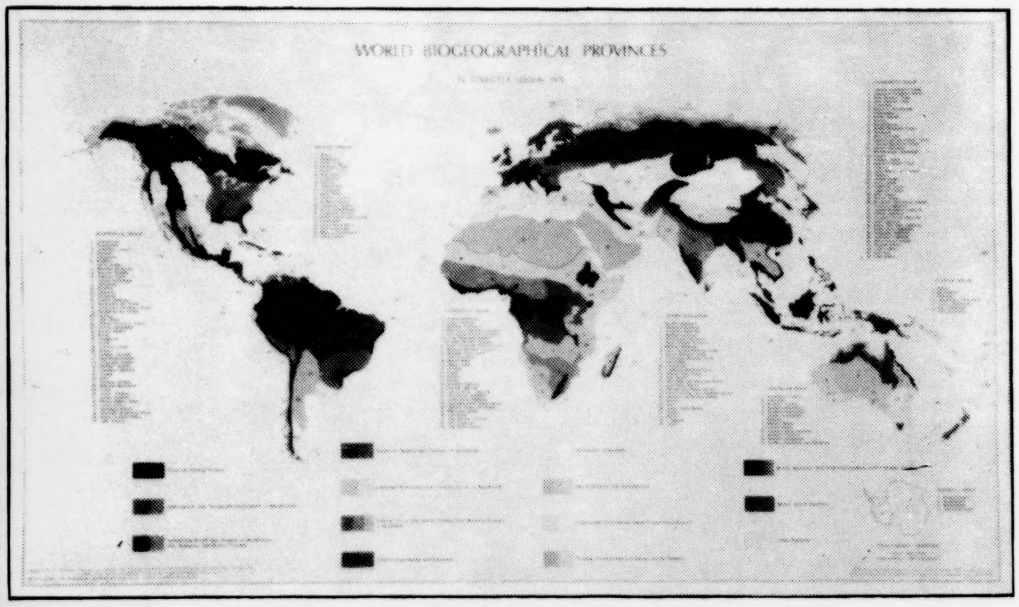
The once and future Europe, where twenty-eight fiercely different movements for independence or self-rule are forcing political acknowledgement of regional cultural diversity. The phenomenon is worldwide and growing. Map by Bruce McGillivray, accompanying articles by Peter Berg and Jon Stewart.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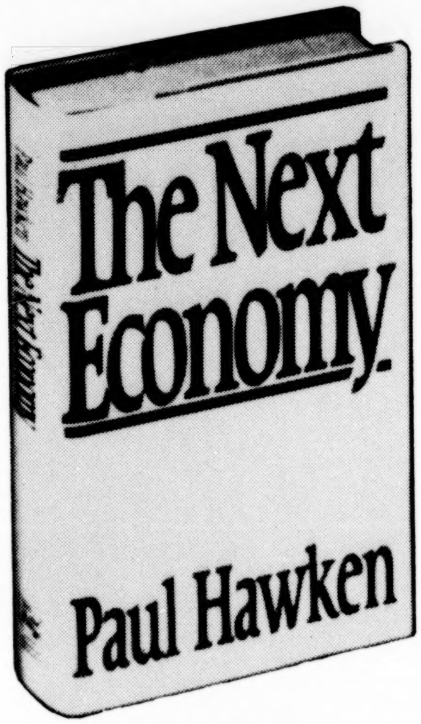


Paul Hawken's
The Next Economy

$12.95 postpaid

Economic civilization is going around a corner the like of which it's never seen before. This is the only guidebook so far. —*Stewart Brand*

(From our review on page 135 of this issue.)

The Next Economy is available by mail order from **CoEvolution** in late April, 1983, a month before it's in the bookstores.

WALL O' WATER — Now available from CoEvolution

$9 for pack of three, postpaid
$15 for two packs of three, postpaid

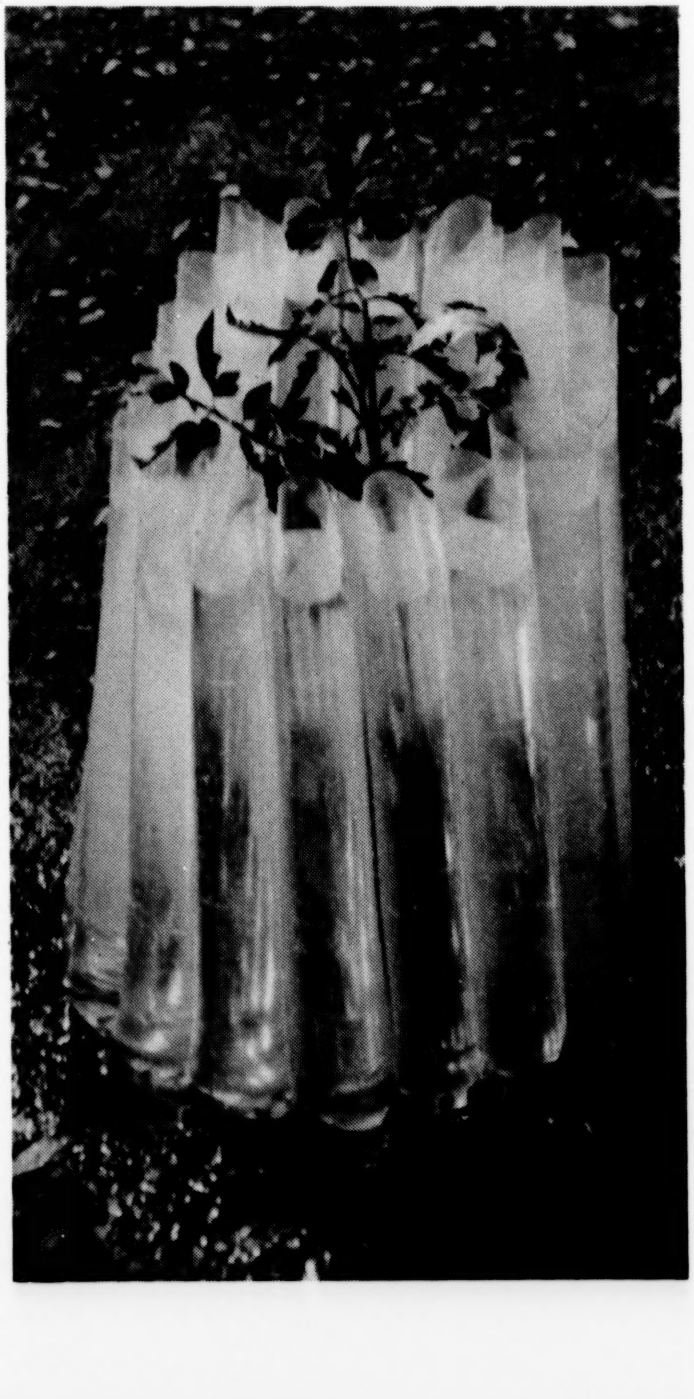
What gardener could resist the idea of getting the tomatoes in a month early, or of harvesting them for weeks after winter frost zapped the rest of the garden? If you've ever used a cloche, coldframe, hot caps, or just clear plastic sheeting, you know what a difference can be made in extending the growing season for all touchy vegetables. This ingenious little device outperforms them all, besides being portable, reusable, and cheap.

The Wall O' Water is an 18-inch-high ring of 6-mil polyethylene tubes that are filled with water and set around plants. The principle is simple — during the day the sun heats the water in the clear plastic tubes, producing a warm water enclosure to fend off the night chill; it's solar mass doing the same job as drums of water in a solar greenhouse.

When the temperature nears 32 degrees, matters become more complicated. It's called "heat of fusion" and refers to the heat that's exchanged as water molecules become ice crystal. It takes 144 times as much thermal energy for the water to freeze as it did for it to drop from 33 degrees to 32 degrees. Thus water temp lags behind as air temp drops, which explains why your pipes don't freeze until the air temp has been in the 20s for many hours, as well as why misting fruit blossoms with water spray can keep them from freezing in a spring frost.

So come sunrise Wall O' Water contains happy tomatoes or eggplants or squash instead of icy corpses, and it's good down to at least 20 degrees. For good measure it also blocks the wind, warms the ground through greenhouse effect, and with its open top won't overheat in the daytime.

—Dick Fugett



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